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INSECTA.

COLEOPTERA. Vol. II. Part 1.

BY

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and GEORGE LEWIS, F.L.S.

1887–1905.

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INTRODUCTION.

Twenty-two families of beetles are dealt with in this Volume: the Silphidæ, Corylophidæ, Trichopterygidæ, Sphæriidæ, and Scaphidiidæ by the Rev. A. Matthews, the Histeridæ by Mr. Lewis, and the remainder by Dr. Sharp. The Heteroceridæ, Parnidæ, Georissidæ, and Cyathoceridæ were placed with the other aquatic and subaquatic beetles in Vol. I. part 2, and the Erotylidæ and Endomychidæ in Vol. VII., of the Coleoptera, these families being sometimes included amongst those here enumerated. We have delayed closing the present volume in the hope of being able to add descriptions of the various "Genera incertæ sedis" still remaining in our collection, but this has proved to be impracticable. Dr. Sharp, however, has described the Rhipidandri, Lec. (=Eutomides, Lacord.), a group that has been variously referred by different authors to the Tenebrionidæ, Scolytidæ, Cioidæ, and Trogidæ. A certain amount of supplementary material has come to hand, and the numerous missing *Hapalips* from Guatemala and Panama (to which attention was called in Vol. VII. p. 250) have now been found, but too late to be included here.

For the families Pselaphidæ to Byrrhidæ, inclusive, and the Rhipidandri, 1532 species are altogether enumerated, of which 996 are described as new, with 83 new genera. The number for each family is as follows:—Pselaphidæ, 100 (69 new); Scydmænidæ, 67 (49 new); Silphidæ, 33 (20 new); Corylophidæ, 29 (25 new); Trichopterygidæ, 54; Sphæriidæ, 1 (new); Scaphidiidæ, 35 (27 new); Histeridæ, 247 (86 new); Phalacridæ, 49 (41 new); Nitidulidæ, 286 (196 new); Trogositidæ, 107 (65 new); Synteliidæ, 2; Adimeridæ (new family), 3 (all new); Colydiidæ, 96 (75 new); Rhysodidæ, 2 (1 new); Cucujidæ, 140 (98 new); Monotomidæ, 31 (29 new); Cryptophagidæ, 103 (94 new); Lathridiidæ, 23 (17 new); Mycetophagidæ, 9 (6 new); Dermestidæ, 71 (54 new); Byrrhidæ, 37 (34 new); and Rhipidandri, 3 (2 new).

During the progress of the work, 97 species (27 of which were obtained amongst the refuse of Mexican tobacco stored in Paris) have been described by various authors

in other publications, bringing the total to 1629. Of these additional species, 50 belong to Pselaphidæ, 34 to Histeridæ, 3 to Phalacridæ, 3 to Nitidulidæ, 2 to Trogositidæ, and 1 each to Scydmænidæ, Silphidæ, Trichopterygidæ, Rhysodidæ, and Lathridiidæ. A list of them is given on pp. 692–696.

These totals show that the Nitidulidæ, Histeridæ, Cucujidæ, Pselaphidæ, Trogositidæ, Cryptophagidæ, and Colydiidæ are particularly well represented in Central America, whereas the Silphidæ (so numerous in temperate regions) are very limited in number, this family having fewer species than the Scaphidiidæ, Byrrhidæ, Phalacridæ, or Trichopterygidæ.

Of the nineteen uncoloured Plates issued with this Volume, seventeen have been printed by Messrs. Bannwarth, of Vienna, and two by Mr. E. Wilson, of Cambridge. The original drawings for Plates I.–XV. were made by the eminent artist Baron Max Schlereth, some of these being amongst the finest delineations of insects we have as yet seen, though the delicacy of his work has, of course, been to a certain extent lost in copying on the stone. The drawings for Plates XVI.–XIX. were made by Mr. E. Wilson or Miss M. A. Sharp. It had been intended to give yet another Plate (XX.), to be partly devoted to figures of the various species of doubtful position; but as this part of the work has now been abandoned, the references to Plate XX. in the text of the Byrrhidæ, pp. 677–686, must be erased.

Ed.

March 1905.

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Page	Line	
2–71		Add the words "gen. nov." and "sp. n." after the names of the various new genera and species described on these pages.
102	28	*for* complicity *read* complexity.
111	28	*after* **mexicanum** *add* sp. n.
132	9	*for* latiorie *read* latiore.
161	48	*for* Chinantla *read* Chinautla.
201	1	*for* **sexstriatis** *read* **sexstriatus.**
226	10	*for* **conspectus** *read* **consputus.**
226	11	for *conspectus* read *consputus.*
227	4	*before* MEXICO *insert* NORTH AMERICA [1 2].
255	27	*for* setosum *read* setoso.
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318	16	*after* **mimetes** *add* sp. n.
347	22	*for* ♀ *read* ♂.
347	23	*after* elytra *add* ♀.
357	14	for *Mecyllodes seriatus* read *Meoncerus seriatus.*
364	2	for *Psiloypga* read *Psilopyga.*
384	1	*erase* sp. n.
443	6	*after* **dubius** *add* sp. n.
460	3	*after* **gracilis** *add* sp. n.
460	7	*for* Sonoro *read* Sonora.
464	1	*after* **funestus** *add* sp. n.
497	1	*after* **humerale** *add* sp. n.
532	14	for *L.* read *R.*
587	6	for *P. rotundatus* read *P. rotundus.*
647	37	for *T. simulaus* read *T. simulans.*
665	6	for *C. mardelloide* read *C. mordelloide.*
669	14	for *C.* read *A.*
677	36	for *Pelobates* read *Pelochares.*
677–686.		Erase the references to Tab. XX.

BIOLOGIA CENTRALI-AMERICANA.

ZOOLOGIA.

Class INSECTA.

Order COLEOPTERA.

Fam. PSELAPHIDÆ *.

This family consists of minute Beetles, many of which are found in ants' nests. The majority of the species are rare and difficult to find even by experienced collectors. Mr. Champion procured a fair series of species in Guatemala and the State of Panama, but from the other divisions of our region we have received but little. Sallé's Mexican collection was very deficient in Pselaphidæ; from Nicaragua we have received only two or three species, and from Costa Rica none.

The arrangement followed is that given by Reitter in his paper entitled "Versuch einer systematischen Eintheilung der Clavigerinen und Pselaphiden" [Verh. Ver. Brünn, xx. pp. 177–211 (1882)].

In the 'Etudes entomologiques' (1855, pp. 8–25) there is a letter written by Victor de Motschulsky on board ship, giving an account of an entomological collecting expedition just made by him on the isthmus of Panama. He had established himself there at Obispo for two or three weeks, and succeeded in finding in that brief time about thirty species of Pselaphidæ. Most of these were new, scarcely anything being then known of the Panama Coleopterous fauna; and in the letter I am alluding to Motschulsky mentions these novelties seriatim, giving them names and occasionally adding a word or two of explanation. These names have no claim to be adopted, and I mention them only because they have been given as "published" in the list of Motschulsky's genera and species issued by the Entomological Society of Russia in 1868. In the case of three or four genera rude outline figures were given, and as these enable us to form an imperfect idea of what Motschulsky intended, their names have been adopted by Reitter and are also included in our list. It is certainly unfortunate that this letter

* By D. Sharp.

of Motschulsky's should never have been followed by any proper description of the objects mentioned and named therein. It is quite clear that he could not have made a proper study of these minute creatures on board ship between Colon and New Orleans, where his letter was written; and, so far as we know, he never returned to their study except to sketch the rude outline figures I have alluded to. Although some of these insects have become disseminated to a small extent under Motschulsky's names, but little value can be attached to these "typical" examples. In the case of two of these names Reitter has had an opportunity of testing them, and finds they were incorrectly applied by Motschulsky; in short, Motschulsky not only failed to describe the species he gave names to, but actually did not even discriminate them.

For these reasons I think the authors of the Munich Catalogue did right in refusing to recognize these names, and certainly Reitter has done all that courtesy and consideration demand when he treated those that were accompanied by figures as entitled to validity.

Subfam. *CTENISTINÆ.*

Group **CTENISTINA.**

DESIMIA.

Tetracis, Sharp, Ent. Monthly Mag. xi. p. 79 (1874) (nom. præoc.).

Desimia, Reitter, Verh. Ver. Brünn, xx. p. 184 (1882).

This genus has hitherto consisted of four or five African species; but in addition to the insect now added to it from our fauna I have still another in my collection from the Amazon valley, so that the genus is probably well represented in the New World.

1. **Desimia dispar.** (Tab. I. fig. 1, ♂.)

Rufescens, elytris sanguineis; antennis articulis ultimis elongatis; prothorace subtransverso, basi in medio pubescente-foveolata, utrinque dense pallide pubescente; elytris apice dense pallide pubescentibus, stria suturali aliaque discoidali integris.

Long. $1\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Paraiso 300 feet (*Champion*).

Antennæ dissimilar in the sexes: in the male, joints 4–7 very small, the eighth joint very elongate and as long as the five or six preceding it, the ninth considerably shorter than the eighth, the tenth nearly as long as the eighth, the terminal joint stouter and rather longer than the eighth; in the female, joints 4–7 not quite so small, the eighth joint similar to the seventh, the ninth as long as the preceding two together, the tenth rather broader and longer than the ninth, the terminal joint stouter and a good deal longer than the tenth, the three terminal joints together equal in length to the six or seven preceding. Head with the antennal tubercles quite connate, prominent; indistinctly

bifoveolate between the eyes; bearing much sugary-white pubescence behind the eyes. Thorax rather broader than long, a little narrowed in front; with a large fovea filled with white pubescence near the base in the middle, and a conspicuous patch of white sugary pubescence on each side of the base. Elytra shining, brighter red than the rest of the surface, narrowed at the shoulders, the latter scarcely elevated; with a curved, rather deep, discoidal stria and a deep sutural stria; the apex covered with a dense pallid, sugary, or glandular pubescence. Hind body rather short, strongly margined, with a depressed fine squamose pubescence.

EPHIMIA.

Ephimia, Reitter, Verh. Ver. Brünn, xx. p. 185 (1882); Deutsche ent. Zeit. xxvii. p. 34.

This genus has recently been established by Reitter for a West-Indian insect. I have now to add a species from our region.

1. **Ephimia crassicornis.** (Tab. I. fig. 2.)

Rufo-castanea, elytris sanguineis, pube depressa flavescente irregulariter vestita; antennis articulis 3° ad 7^{m} brevissimis, tribus ultimis elongatis; prothorace parvo, basi in medio foveolata; elytris quam prothorax longioribus.

Long. 2 millim.

Hab. Panama, San Miguel in the Pearl Islands (*Champion*).

Antennæ thick; pubescent, so that the articulations are not very distinct; the terminal three joints elongate, quite as long as the other eight together; the terminal joint rather longer than the preceding two joints united. Head narrow, with convex coarsely faceted eyes; the antennal tubercles quite connate; the front placed quite at right angles with the vertex. Thorax only about half as broad as the elytra; finely pubescent, with a large pubescent basal fovea. Elytra rather elongate, narrow at the shoulders, the latter not raised; the surface within the shoulders broadly depressed; with a fine sutural stria, but no discoidal one; the hind margin very densely covered with yellow pubescence.

This insect is rather larger than *E. simoni*, Reitter, and also has a longer terminal joint to the antennæ, much larger eyes, broader thorax, and longer elytra. The sex of the unique example discovered by Mr. Champion is doubtful.

Group **TYRINA.**

HAMOTUS.

Hamotus, Aubé, Ann. Soc. Ent. Fr. 1844, p. 92.

This is a genus peculiar to Tropical America; it comprises about twenty very closely allied species. An examination of the maxillary palpi is essential for the discrimination

of the species, these organs being very variable in structure in this genus and often differing in species otherwise exceedingly similar.

Hamotus is numerously represented in our region.

§ 1. *Thorax with a transverse sulcus in front of the base.*

1. Hamotus pubiventris.

Major, parum latus, rufus, densius fulvo-pubescens; antennis crassis, clava triarticulata, maxima; palpis maxillaribus articulo ultimo elongato, apice intus curvato, acuminato; elytrorum stria discoidali elongata. Long. $3\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Antennæ thick; joints 2–8 subequal, the second joint, however, rather longer than the others; the club extremely large; the ninth joint rather longer than broad, the tenth slightly longer, though scarcely so long as broad, the terminal joint very large, broader than the preceding one, subrotundate, but still longer than broad. Terminal joint of the maxillary palpus of peculiar form, and with its appendage larger than in the other known species. Head with thick antennary tubercles, which are strongly elevated and separated by a deep depression; the two foveæ on the vertex large, approximate, and but little distant from the frontal depression. Thorax subglobose; the basal fovea extending back to the basal margin, and connected to the lateral fovea by a very fine sulcus. Elytra flat, ferruginous in colour, with a remarkably distinct discoidal stria extending three fourths of their length. Hind body elongate, very broadly margined, very densely covered with a depressed fulvous pubescence.

Only one example was received of this very distinct species. I suppose it to be a female, from the absence of any peculiar structure, and from the form of the hind body.

2. Hamotus commodus.

Hamotus commodus, Schauf. Sechzig neue Pselaph. p. 33 (Dresden-Oberblasewitz, 1880)[1].

Hab. MEXICO, Teapa [1].

3. Hamotus tritomus.

Hamotus tritomus, Reitt. Deutsch. ent. Zeit. xxvi. p. 132 [1].

Hab. MEXICO (*Reitter*); GUATEMALA, El Reposo, Zapote, San Isidro, Cahabon, San Juan in Vera Paz, Teleman, Panzos, La Tinta (*Champion*); NICARAGUA, Granada (*Sallé*), Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui, David (*Champion*).—SOUTH AMERICA, Colombia [1].

Though we have a good series of this species from Zapote and El Reposo, I have not been able to detect any sexual distinction; from most of the other localities only one or

two examples were obtained. The only Mexican exponent I have seen was sent to me by Herr Reitter, who obtained it from Hamburg. Judging from this fact and the way in which the specimen was mounted, I conclude that it was probably found by Herr Höge at Jalapa.

This species, though exceedingly similar to those following, is distinguished by the fact that the curvate sulcus in front of the base of the thorax has no definite fovea on the middle; the sulcus, however, may be described as subfoveate, as it is deeper in the middle and in this part slightly expanded in front, this expansion being somewhat concealed by a gibbosity or convexity of the surface of the thorax in front of it.

4. **Hamotus vicinus.**

Rufus, elytris dilute sanguineis, pube depressa minus dense vestitus; antennarum clava triarticulata, elongata; elytris plica intra-humerali abbreviata; abdomine segmento secundo dorsali quam segmentum basale paullo majore.

Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ with joints 4–8 quite similar to one another, small and transverse; joints 9–11 forming an elongate club; the ninth joint quadrate, the tenth a little broader and slightly transverse, the terminal joint a good deal broader and quite as long as the preceding two together. Head rather broad and short, with a moderate fovea on each side near the eye. Thorax subglobose; with a large fovea in front of the base in the middle connected by a fine sulcus with the lateral fovea. Elytra with a very abbreviate intrahumeral depression.

Although extremely similar to *H. tritomus*, this insect is readily distinguished by the definite basal thoracic fovea, and the more abbreviate basal dorsal segment of the hind body. The last joint of the maxillary palpus is similar in form to that of *H. tritomus*, but is distinctly broader and shorter.

Only two examples were obtained; they are quite similar to one another and of uncertain sex.

5. **Hamotus difficilis.**

Rufus, elytris dilute sanguineis, pube depressa minus dense vestitus; antennarum clava triarticulata, elongata; elytris plica intrahumerali abbreviata; abdomine minus late marginato, segmentis dorsalibus primo et secundo æqualibus.

Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Although only one example of this insect was obtained, and it is very similar to *H. vicinus*, yet, as I have failed to reconcile it therewith, and it will not agree with any of the other species, I treat it as distinct. It differs from *H. vicinus* in possessing a narrower hind body with less broad lateral margins, a more slender terminal joint to

the maxillary palpus (resembling in this respect *H. tritomus*), and a rather more slender club to the antenna.

The example has no mark which would lead me to believe it to be a male.

6. Hamotus monachus.

Hamotus monachus, Reitter, Deutsch. ent. Zeit. xxvi. p. 131 [1].

Rufus, elytris dilute sanguineis, pube depressa minus dense vestitus; antennarum clava triarticulata, elongata; elytris plica intrahumerali sat abbreviata; abdomine segmento secundo dorsali quam segmentum basale paullo minore.

Long. $2\frac{1}{3}$ millim.

Hab. MEXICO, Yucatan [1]; GUATEMALA, El Reposo, Zapote (*Champion*).

This insect presents the closest resemblance to *H. vicinus* and *H. tritomus*; from the latter it is readily distinguished by the definite thoracic fovea; from the former it presents the following distinctions:—The terminal joint of the maxillary palpus is rather more elongate, the intrahumeral depression on the elytra is prolonged to form a short but definite plica, and the first dorsal segment is more elongate and evidently longer than the second.

The unique example transmitted to me by Herr Reitter is a female, and is remarkable from the elongation of the apical segments of the hind body. This was the only sex known to Reitter. Mr. Champion met with only two examples, both males, the whole of the ventral plates being rather broadly and deeply impressed along the middle. The typical example received from Herr Reitter and the individual found at El Reposo by Mr. Champion are both darker in colour than I have described above; but this, I believe, is chiefly due to their imperfect preservation.

7. Hamotus latipalpis.

Rufus, elytris dilute sanguineis, pube subtili depressa vestitus; antennarum clava triarticulata, elongata; elytris plica intrahumerali abbreviata; abdominis segmento basali dorsali quam segmentum secundum minore.

Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Extremely similar to *H. vicinus*, but with very important distinctions:—The pubescence of the surface much finer and shorter; the eyes larger, and placed quite at the hinder part of the head; the terminal joint of the maxillary palpus remarkable on account of its very short broad form, being in fact nearly as broad as long, so that its extremity is not acuminate; and the basal dorsal segment is abbreviate.

Only one example, of uncertain sex, was found.

8. Hamotus curtipalpis.

Rufo-brunneus, elytris sanguineis, pube subdepressa vestitus; antennarum clava triarticulata, elongata; elytris

plica intrahumerali abbreviata; abdominis segmentis dorsalibus primo et secundo æqualibus; palporum articulo ultimo parvo, brevi, lato.

Long. $2\frac{1}{3}$ millim.

Hab. Panama, Bugaba, David (*Champion*).

This species is extremely similar to *H. vicinus* and the allied species, but differs from all of them in the shape of the last joint of the maxillary palpus. This latter is comparatively small, its inner margin nearly straight though minutely prolonged internally at the apex, while the outer margin is very convex; the length of this joint is about the same as that of the tenth joint of the antennæ.

Only two examples are extant; they are in a very decayed condition, and are, I believe, both of the male sex, though this is indicated only by a minute flattening of the basal ventral segments.

9. **Hamotus suturalis.**

Hamotus suturalis, Schauf. Sechzig neue Pselaph. p. 32 [1] (1880).

Hab. Mexico, Teapa [1].

10. **Hamotus nodicollis.**

Hamotus nodicollis, Raffray, Rev. d'Ent. ii. p. 240 [1].

Hab. Mexico [1].

§ 2. *Thorax without transverse sulcus.*

11. **Hamotus singularis.**

Hamotus singularis, Reitt. Deutsch. ent. Zeit. xxvi. p. 133, note [1].

Hab. Mexico (*Bilimek* [1]), Cordova (*Sallé*); Guatemala, San Isidro 1600 feet, near the city, Aceytuno, Capetillo, San Juan in Vera Paz, Senahu (*Champion*); Panama, Bugaba 800 to 1500 feet, David (*Champion*).

I am not able to point with certainty to any external sexual distinctions of this insect; the condition of the pencil of hairs at the extremity of the hind tibia varies according to the state of the individual, and, moreover, can be flexed outwards under the apex of the tibia and tarsus so as to be concealed, though actually present.

12. **Hamotus setipes.** (Tab. I. fig. 3.)

Rufo-castaneus, elytris sanguineis, pube erecta elongata sat dense vestitus; capite latiore, tuberculis antennariis sat distantibus; tibiis omnibus extus perspicue longius setosellis.

Long. 3 millim.

Hab. Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Head broad, with two moderately large foveæ on the posterior portion; the antennal tubercles clearly separated, so that a third fovea just behind the space separating them

remains quite distinct. The ninth and tenth joints of the antennæ are transverse, but not excessively short; the terminal joint very thick and large. The fovea near the middle of the base of the thorax is large and distinct. The elytra have a well-marked sutural stria which is extremely deeply impressed at the base; and external to this stria, and separated therefrom by a raised space, another deep rather long impression which is not continued backwards as a stria.

Though very similar to *H. singularis* this is a larger insect, readily distinguished by the broader head, the more widely separated antennary tubercles, and the long setosity of the tibiæ. The sexual distinctions are slight, and almost confined to a difference in the shape of the hind body, this latter being rather longer, with the under surface more curvate, and the middle of the ventral rings flattened, in the male. In each sex there is a fine pencil of hairs at the extremity of the hind tibia, and an extremely slight incurvation of the tibia itself near the apex.

13. **Hamotus parvipalpis.**

Rufo-niger, pedibus rufis; palpis testaceis, his articulo ultimo parum magno et graciliter subovali; elytris intra humeros breviter impressis.

Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is closely allied to *H. singularis*, having a similar structure of the antennæ and of the thoracic foveæ; it is, however, well distinguished by a number of characters, the most important of which is the smaller and more slender terminal joint of the maxillary palpi. The pubescence of the surface is darker than in the allied species; the antennæ are extremely thick, with the joints 4–10 strongly transverse, and the terminal joint very broad; the head is not broad, and the antennary tubercles, though not very broad, are well separated, so that the small fovea between them is quite definite. The thorax is smaller and more globose than in *H. singularis*.

I have seen only two examples; unfortunately both are in a very decayed condition.

14. **Hamotus rostratus.**

Piceus, elytris sanguineis, palpis pedibusque rufis, pube elongata minus dense vestitus; antennis longioribus, articulis intermediis haud transversis; capite gracili rostrato, vertice foveolis grandibus impresso; palpis majoribus.

Long. 3 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ with the ninth and tenth joints elongate, intermediate in breadth between those preceding it and the terminal joint, this latter elongate, rather stout, not quite twice as long as broad. Palpi very large. Antennary tubercles convex, separated by a deep depression in which the frontal fovea is lost; the two foveæ on the vertex large. Thorax subglobose, rather large; the basal fovea only moderately large, filled with fine pubescence. Elytra red, with very elongate erect pubescence, the intrahumeral plica

elongate, densely pubescent at their hind margin. Tibiæ pubescent externally; those of the hind legs quite straight and slender, and without definite tuft of hairs at the extremity.

Only one example was met with of this fine species; it forms a natural transition to the following.

15. **Hamotus grandipalpis.** (Tab. I. fig. 4.)

Piceo-sanguineus, pube elongata erecta dense vestitus; antennis, palpis pedibusque rufo-obscuris, illis elongatis gracilibus; palpis maxillaribus maximis; capite gracili rostrato, vertice trifoveolato; abdomine segmentis dorsalibus quatuor conspicuis, longitudini subæqualibus.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ with very long basal joint; the second, third, and fourth joints subequal, the fifth and sixth rather elongate, the seventh and eighth a little shorter, but each a good deal longer than broad, the ninth and tenth elongate but scarcely at all thicker than the preceding two, the tenth very long and slender and with its inner margin curvate. Palpi with very elongate second joint and very large terminal joint. Head with the strongly elevated antennary tubercles separated by a deep depression; with two foveæ near the vertex, and a third depression behind these in the middle. Thorax rather large, subglobose; the basal fovea distinct, quite isolated. Elytra with deep but short intrahumeral depression. Hind body with the margins of the first and second segments very largely developed. Hind tibia without apical pencil.

Only one example was met with of this species; it may be a male, as the depression on the metasternum is remarkably deep. Although the maxillary palpi are so strongly developed, I cannot treat this as a generic character at present, as there is very great variety in the size and form of these organs amongst the species of this genus inhabiting our region.

CERCOCERUS.

Circocerus, Motschulsky, Etudes ent. 1855, p. 16, and 1856, tab. f. 4; Leconte, New Sp. N. Am. Coll. p. 27 (1863).

Cercocerus, Leconte, Class. Col. N. Am. p. 57 (1861); Reitter, Verh. Ver. Brünn, xx. p. 186 (1882).

The characters given of this genus show nothing to distinguish it from *Hamotus*, of which I have little doubt it is merely a synonym. As, however, I do not actually know either of the species ascribed to it, I give it a distinct place in deference to Reitter, who treats it as a valid genus.

1. **Cercocerus batrisoides.**

? *Circocerus perplexus*, Motsch. Etudes ent. 1855, p. 16 [1].

Circocerus batrisioides, Motsch. Etudes ent. 1856, tab. f. 4.

? *Circocerus batrisoides*, Lec. New sp. N. Am. Col. p. 27 (1863) [2].

Hab. NORTH AMERICA, New Orleans [2].—PANAMA, Obispo [1].

Motschulsky (Etudes ent. 1855, p. 16) speaks of what we may presume to be the same insect under the name of *C. perplexus*; *C. batrisioides*, Motsch., is said by Reitter to be the same as the North-American *C. batrisoides*, Lec.

Subfam. *BATRISINÆ*.

METOPIAS.

Metopias, Gory, in Guérin's Mag. Zool. 1832, Ins. t. 42, text p. 1; Aubé, l. c. 1833, Mon. Pselaph. p. 13, t. 78. f. 1; Reitter, Deutsche ent. Zeit. xxix. p. 334 (1885).

This genus is purely tropical American, and comprises five species; Reitter having recently separated another five species under the generic name of *Metopioxys*.

1. **Metopias elegans.** (Tab. I. fig. 10.)

Pallide castaneus, elytris rufo-testaceis, antennis pedibusque testaceis, pube erecta subtili vestitus; prothorace elongato, ante basin transversim sulcato; antennis valde elongatis, articulo tertio graciliter ovali et sequentibus tribus simul sumptis majore.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ pale yellow, longer than the insect itself; the first joint as long as the following seven or eight joints together, the second longer than broad, the third broader and very much longer than the second, the five following joints subequal to one another, simple, the ninth scarcely thicker but much more elongate, the tenth small, the eleventh rather longer than the ninth and quite acuminate at the apex. Palpi rather short. Head elongate, the vertex with a deep impression; the antennal tubercles divided by a groove, and the posterior part of their prolongation projecting backwards in an angular manner into the depression on the vertex. Thorax slender, unarmed; very obsoletely longitudinally canaliculate along the middle; with a deep fine transverse sulcus in front of the base, and without lateral channels. Elytra elongate, narrowed at the shoulders, the latter only slightly prominent, with a very deep depression along the suture, and a short basal depression external to this.

The solitary example discovered is no doubt a male, the extremity of the hind body beneath being deeply excavate, while in front of the excavation there are two erect subcurvate spinous processes. The species is not closely allied to any yet described, but perhaps is nearest to *M. hirtus*, Reitt., from Brazil.

BATRISUS.

Batrisus, Aubé, in Guérin's Mag. Zool. 1833, Mon. Pselaph. p. 45.

This is now a very large genus comprising upwards of two hundred described species, and is found in most parts of the world. It contains a very great variety of forms, and is especially remarkable on account of the extraordinary sexual characters, scarcely any part of the body being exempt from being the seat of peculiar structures in the male

sex. The larger number of the Tropical-American forms belong to the subgenus *Arthmius*; this subgenus has not been correctly treated up till now: the females of the species belonging to it are different in shape and usually in colour from the males, and have been regarded as specifically distinct; the "table" recently given by Reitter of the South- and Central-American species known to him (Verh. Ver. Brünn, 1883, pp. 377 and 378) requires emendation on this account, the insects enumerated by this author under Section B of *Arthmius* being females.

§ 1. *Thorax without any longitudinal channel, but with a transverse sulcus in front of the base; elytra without discoidal stria; form different in the sexes.* (Subgen. Arthmius.)

1. **Batrisus geniculatus.**

Rufo-testaceus, nitidus; antennis pedibusque testaceis, illis parum elongatis; capite plano, lævigato, utrinque foveolato.

Long. 2 millim.

Mas antennis medio curvatis; tibiis anterioribus ultra medium valde dilatatis, apice abrupte angustato.

Hab. Mexico, Jalapa (*Höge*).

The head is short and small; without sculpture, but with a distinct fovea on each side behind; the eyes small. The thorax is quite small, slender; and without channels, except the delicate transverse sulcus in front of the base.

The sexual differences are very considerable: the male is of a pallid rufescent colour and has longer elytra than the female, the female being of a more castaneous tint; the fifth joint of the antennæ is considerably enlarged behind and with the two following joints forms a curve, the tenth joint is scarcely transverse; the front tibiæ are greatly dilated, and then below the middle suddenly narrowed; the middle tibiæ are furnished with a minute internal uncus at the extremity; the apical half of the hind body is occupied beneath by a depression, and at the base of the latter is an elevated short carina from which a pubescent wing diverges on either side. Five examples were obtained by Herr Höge, and I believe I have identified the sexes with certainty.

2. **Batrisus curvicornis.**

Batrisus curvicornis, Schauf. Nunq. Otios. ii. p. 286 [1]; Reitt. Verh. z.-b. Ges. Wien, 1882, p. 378 [2].

Hab. Mexico (*Bilimek* [2], *in coll. Reitter*), Yucatan [1], Cordova (*Sallé*).

Schaufuss's description is a very poor one, and contains no characters that would enable his species to be discriminated from those allied to it, and I give therefore the male characters drawn from a Mexican example communicated by Herr Reitter. The unique exponent from Sallé's collection which I take to be this species is in bad preservation. In the male the front tibiæ are slightly swollen from the base to below the middle, the apical third being again slender (this apical constriction is, however, not abrupt, so that the prominent angle terminating the swelling is very obtuse and not at

all spinose); the middle tibiæ are mucronate at the extremity; and the antennæ have a curve extending from the fourth joint to the seventh, and the fourth joint is slightly enlarged beneath. The female is not known, but I think it likely that *B. quadripunctatus*, which Schaufuss received from the same source as his *B. curvicornis*, may be the other sex of this species. Reitter's tabulation [2] unfortunately also needs emendation, as the form of the elytra (which has led him to place *B. quadripunctatus* in a different group from *B. curvicornis*) is in these insects a sexual character.

3. **Batrisus quadripunctatus.**

Batrisus quadripunctatus, Schauf. Nunq. Otios. ii. p. 273 [1]; Reitt. Verh. z.-b. Ges. Wien, 1882, p. 378 [2].

Hab. MEXICO (*Bilimek* [2], *in coll. Reitter*), Yucatan [1], Jalapa (*Höge*).

As mentioned above, under *B. curvicornis*, I believe this may prove to be the female of that species; but as I cannot state this with certainty, I do not venture to sink the name at present. *B. quadripunctatus* is scarcely distinguishable from the females of *B. geniculatus* and *B. simplicicornis*, except that the antennæ are decidedly shorter than those of the latter, slightly shorter than those of the former, species, and have the sixth and eighth joints more distinctly smaller than those contiguous to them. Although Schaufuss in his description of *B. curvicornis* [1] expresses himself as having both sexes of the species before him, yet it is more likely that his supposed female was a male of some other species having simple antennæ, such as *B. simplicicornis*; for the difference in form of the sexes in this subgenus has not before been correctly dealt with—the females, in fact, having been treated as a section of the genus distinct from that of their consorts.

4. **Batrisus simplicicornis.** (Tab. I. fig. 6, ♂.)

Rufo-testaceus, nitidus, parce pubescens; antennis pedibusque testaceis, illis parum elongatis; capite plano, lævigato, utrinque foveolato.

Long. vix 2 millim.

Mas tibiis anterioribus gracilibus, ultra medium paullo latioribus, apice constricto.

Hab. GUATEMALA, near the city (*Champion*).

Extremely similar to *B. curvicornis* and *B. geniculatus*, but with strongly marked differences in the male characters. In this sex the antennæ are quite straight; the front tibiæ only slightly broader from the base to below the middle, but there suddenly though only slightly contracted; the middle tibiæ armed with a mucro at the terminal inner angle; and the hind body beneath has a large transverse depression at the extremity. The female is of a more castaneous colour, and has shorter elytra, and slightly shorter antennæ, than the male; I can only distinguish this sex from the female of *B. geniculatus* by the antennæ being slightly longer and stouter, and the thorax just perceptibly more elongate.

5. Batrisus ——?

Hab. Guatemala, Totonicapam between 8500 and 10,000 feet (*Champion*).

Only a single female was found of this insect, and it is therefore not advisable to attempt to found a species on it; I have little doubt, however, that it is quite distinct, as it has a much more elongate hind body than any of its allies.

6. Batrisus truncaticeps.

Gracilis, rufo-testaceus, nitidus, parce pubescens; antennis pedibusque testaceis, illis gracilibus; capite plano, lævigato, utrinque foveolato.
Long. $1\frac{7}{8}$ millim.
Mas capite posterius recte truncato, tibiis anterioribus inflatis, antennis basi curvatis.

Hab. Guatemala, near the city (*Champion*).

Although quite similar to *B. simplicicornis* and *B. curvicornis* the male characters are very different:—The head is quite straight behind, not rounded, with well-marked rectangular angles; the antennæ are slender, and the third, fourth, and fifth joints form a curve, the fifth being prolonged and projecting downwards, the sixth, seventh, and eighth joints are slender and straight, the three terminal joints forming an elongate slender club; the front tibiæ are much inflated, and when viewed in one direction appear to have the lower half abruptly more slender, and the swollen upper part is, I think, occupied by a cavity or fovea opening below on the front face of the tibia; the middle tibiæ are mucronate at the extremity; and the terminal ventral segment is flattened but not foveate.

Only one example of this curious insect was obtained; mounted on the same card with it by Mr. Champion is a female which I am unable to distinguish by any character from that sex of *B. simplicicornis*, still so close are the females of this group of species that it is just possible it may be the female of *B. truncaticeps*; under these circumstances it is doubtful whether the peculiar truncate vertex be a specific or a sexual character.

7. Batrisus castaneus.

Gracilis, nitidus, castaneus; antennarum apice pedibusque testaceis; capite plano, utrinque foveolato.
Long. $1\frac{3}{4}$ millim.
Mas tibiis anterioribus ultra medium rotundato-subdilatatis.

Hab. Guatemala, San Juan in Vera Paz (*Champion*).

This is a very peculiar species of which the male only has been discovered, and of that sex only a single example. The colour and the shape of the elytra are more like those of the female sex of the preceding species; the elytra, however, though rounded at the sides and shoulders, are much longer than in the females of *B. simplicicornis*; the head also differs but little from that of the female of *B. simplicicornis*, being destitute of peculiarities of structure or punctuation. The antennæ are slender and

rather elongate; castaneous in colour, with the apical two or three joints paler; they are simple, and without peculiarity in the shape of the joints, though the eighth joint is much shorter than the seventh. The thorax is elongate and slender, with its transverse line placed far in front of the base. The elytra are rather elongate, without humeral angle or tuberculation, and the six punctures at the base are minute and indistinct. The dorsal segments bear, in addition to the scanty pubescence, a few fine long erect setæ; the apical ventral segment is feebly depressed and bituberculate at the extremity. The front tibiæ, though slender, are peculiarly distorted and appear very different in shape according to the point from which they are viewed; the middle tibiæ finely mucronate at the apex.

8. **Batrisus scaphiger.**

Nigro-piceus, nitidus, parce pubescens; antennis castaneis, apice pedibusque testaceis; capite plano, utrinque foveolato.

Long. $1\frac{2}{3}$ millim.

Mas antennis medio curvato, tibiis anterioribus medio subinflatis, trochanteribus posterioribus majoribus, scaphiformibus, dense pubescentibus.

Hab. ? MEXICO (*Sallé*).

This insect also is only known by one male example. The head is without structural peculiarities, flat and shining, and with a very evident fovea on each side. The antennæ are rather long, and are curved from the fifth to the ninth joints (although there is no very striking alteration in the shape of these joints); the fourth joint is slightly larger than the third, the fifth is much longer than either the one preceding or the one following it, the eighth joint has the lower inner face a little cut away, the tenth joint is not quite so large as the ninth, and the terminal joint is elongate and slender. The front tibiæ are only slightly inflated, the greatest width being about the middle; the middle tibiæ finely mucronate at the extremity. The hind trochanters are of a most extraordinary form, being enlarged, and with a concave face behind, the concavity densely set with pubescence. The hind body is also peculiar in form: on the ventral aspect the intermediate rings are not exposed, so that it there appears to be composed of only two segments, of which the apical one is broad and flat and its hind margin quite broad and gently emarginate—thus allowing a considerable portion of a supplementary segment to be perceived.

Although the locality is not exactly known, there can be no difficulty in identifying this insect, the structure of the posterior trochanters being unique; in the much rounded shoulders, as well as in the structure of the head, it resembles *B. castaneus*.

9. **Batrisus monoceros.**

Nitidus, parce pubescens; capite abdomineque nigris; prothorace elytrisque læte rufis; antennis pedibusque testaceis; corpore subtus rufo-obscuro; vertice subconvexo, utrinque foveolato.

Long. $1\frac{7}{8}$ millim.

Mas capite anterius in spinam elongatam acutissimam, anterius prominulam, producto; antennis medio parum curvatis; tibiis anterioribus apicem versus sat inflatis.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

This species also I must describe from a single male. The antennæ are unicolorous yellow, slightly curved from the sixth to the eighth joints, this latter being prolonged and acuminate beneath; the ninth and tenth joints not very much larger than the others, each not longer than broad; the terminal joint large, as long as the preceding three together. Head black; produced in the middle in a forward and upward direction so as to form a spine or horn with extremely acute point. The elytra are rather elongate, and contrast strongly in colour with the black hind body, the shoulders slightly plicate-elevate. The front tibiæ are distinctly inflated before the extremity; the middle tibiæ finely mucronate at the apex. The apical ventral segment is slightly impressed.

10. **Batrisus armatellus.**

Nitidus, parce pubescens; antennis pedibusque rufis; capite haud plano; elytris basi sexpunctatis.
Long. 2 millim.
Mas sanguineo-castaneus, capite inter antennas spina obliqua suberecta armato.
Fem. castanea, capite mutico, elytris lateribus et humeris rotundatis.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 4000 feet, David (*Champion*).

The male of this species differs from the same sex of *B. curvicornis* and its allies in having the front tibiæ and the antennæ normal in structure, while the head exhibits remarkable sexual peculiarities. In this sex, just between the insertion of the antennæ, there arises a spine or short horn, broad at the base but acuminate at its free extremity; this spine or horn is directed obliquely backwards and upwards, and behind it is a transverse depression, the depression almost divided into two parts by the spine, but in the middle behind the apex of the spine with a prolongation backwards; there is an indistinct fovea near each eye; the middle tibiæ are armed at the apex with a very evident mucro, and the trochanters of the same pair of legs provided behind with a patch of short pubescence; the last ventral segment is largely but not at all deeply impressed; and the antennæ are slightly larger than those of the female. The sexual characters are quite sufficient for the identification of the male; the female, however, is very different, it being less rufescent in colour, and with the elytra shorter and completely rounded at the sides and shoulders. The female may be distinguished from the corresponding sex of *B. simplicicornis* and its allies by its larger and longer antennæ, the sixth and seventh joints especially being larger; and still more decisively by the structure of the head, which is but little shining, and is minutely punctate and pubescent on each side near the eye, the vertex behind being a little convex in the middle and rather indistinctly foveolate on either side.

11. **Batrisus coronifer.**

Batrisus coronifer, Reitt. Verh. z.-b. Ges. Wien, 1882, p. 375 [1].

Hab. Panama [1].

According to a type communicated by Herr Reitter, this insect is allied to *B. armatellus*, but is of more dilute colour, with elongate slender antennæ, the spine on the front of the head indistinct, and the vertex in the middle behind somewhat raised and emarginate; the depressions behind the clypeal spine slight compared with those of *B. armatellus*.

12. **Batrisus plicicollis.**

Batrisus plicicollis, Reitt. Verh. z.-b. Ges. Wien, 1882, p. 376 [1].

Hab. Mexico, Orizaba (*Bilimek* [1]).

Reitter supposed he had both sexes of this species, but the five individuals I have received from him are all females; and as he has not indicated any of the characters usually distinctive of the male in this group, I imagine this sex is most probably still unknown, and anticipate it will prove to have the head ornamented by some structures analogous to those seen in *B. armatellus* and *B. coronifer*. The species is readily recognized, at any rate in the female sex, by the peculiar form of the thorax, the latter being compressed laterally so as to appear longitudinally raised along the middle.

13. **Batrisus vividus.**

Batrisus vividus, Schauf. Nunq. Otios. ii. p. 282 [1] (nec Motsch.).

Hab. Central America [1].

This insect also was described from a single female, and cannot be identified at present; it is stated to differ from Schaufuss's supposed female of *B. curvicornis* in the structure of the labrum. The name was originally proposed by Motschulsky; and Reitter's remarks (Verh. z.-b. Ges. Wien, 1883, pp. 375, 376) as to the confusion with regard to specimens existing in collections under this name should be referred to. It is quite possible that Schaufuss's insect may be the female of *B. coronifer*, Reitt.

§ 2. *Thorax without longitudinal or transverse channels, but denticulate at the sides.* (Subgen. Oxarthrius).

14. **Batrisus hamaticollis.** (Tab. I. fig. 5, ♂.)

Sanguineus, parce pubescens, nitidus; antennis pedibusque rufis; capite utrinque pone oculos barbato; prothorace posterius fortiter bispinoso; elytris impunctatis, humeris sat prominulis.

Long. $2\frac{1}{4}$ millim.

Hab. Guatemala, Las Mercedes 3000 feet (*Champion*).

A single male only has been obtained of this species, and the description therefore is of that sex only.

Antennæ elongate, the basal joint largely exposed; with a very elongate club, formed by the four terminal joints—these joints somewhat asymmetric in form, the eighth being slightly more incrassate on one side than on the other, the ninth transverse and with one of its angles evidently acuminate, the tenth also transverse, and with one of its faces shining and somewhat impressed, the terminal joint large and quite as long as the preceding two joints together. Head broad between the eyes, the latter placed quite as near to the antennæ as to the neck; narrowed behind the eyes, and bearing on this part an erect pubescence; its surface uneven, the vertex convex and obscurely foveolate on either side of the convexity; depressed between the antennal elevations and the vertex, and with a very indistinct carina on either side near the eye. Thorax convex, with a minute lateral spine on either side in front of the middle; much narrowed behind the denticles, and with two large acute prominences in front of the base. Elytra depressed at the base, so that the basal foveation cannot be distinguished. First segment of the hind body rather broadly margined. Hind tibiæ with a distinct mucro at the extremity; middle tibiæ more feebly mucronate; middle femora with a large straight tooth placed almost in the middle. Terminal ventral plate small, and only feebly impressed.

15. **Batrisus rivularis.**

Batrisus rivularis, Schauf. Nunq. Otios. ii. p. 285 [1].

Hab. Panama [1].

§ 3. *Thorax without longitudinal or transverse channels, unarmed.*

The species I refer to this section represent a new subgenus, which I should have treated as generically distinct from the other New-World *Batrisi* had it not been that it shows considerable analogy with the European *B. formicarius.*

16. **Batrisus crassipes.** (Tab. I. fig. 7.)

Major, elongatus, castaneus, nitidus, crebrius pubescens; elytris intra humeros impressis, basi quadrifoveata, plica discoidali abbreviata.

Long. 3 millim.

Hab. Panama, Bugaba 800 to 1800 feet, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ thick; ninth joint but little different from the eighth, the tenth joint also only slightly differing from the ninth and scarcely so long as broad, the terminal joint very stout. Head narrow, with convex, rather large, finely faceted eyes, the latter placed much in front of the hind margin; thickened over the insertion of each antenna, so that the front part consists of an elevated transverse portion behind which there is

an angular depression, the vertex being convex. Thorax narrow, longer than broad; bearing a fine erect pubescence, quite impunctate. Elytra subquadrate, the shoulders elevated, and with a short discoidal plica; from behind appearing only quadrifoveate at the extreme base; distinctly pubescent, but almost impunctate. Hind body with an extremely large basal dorsal plate, the latter very deeply transversely depressed in front. Legs stout.

The two examples obtained are quite similar in structure, and I suspect are of the male sex, the metasternum being rather deeply impressed. The latter also exhibits an angular prominence on each side close to the outer termination of the coxa, while behind the coxa the trochanter is compressed so as to form a somewhat similar prominence, the articulation being included between the two prominences: in order to see these characters properly the insect must be viewed in profile. The ventral rings are of rather peculiar form; the basal one very short in the middle and scarcely longer there than the following two together, and the fourth longer than those preceding it; the terminal plate is not impressed. The under surface is much less pubescent than the upper.

17. **Batrisus lamellipes.**

Major, elongatus, castaneus, nitidus, breviter parce pubescens; elytris intra humeros impressis, basi quadrifoveata, plica discoidali abbreviata.

Long. 3 millim.

Hab. Panama, Bugaba (*Champion*).

This species bears a great general resemblance to *B. crassipes*, but exhibits some very important differences: the pubescence of the surface, especially on the anterior parts, is quite minute; the eyes are smaller and but little prominent; the anterior elevation of the head is separated from the vertex by a deep depression, the depression scarcely angular in form; the ninth and tenth joints of the antennæ are scarcely at all broader than the others, the terminal joint being very large; the legs are considerably broader, with the tarsi shorter and thicker, and the femora more compressed and lamellate; the terminal joint of the maxillary palpi is of a different and more peculiar form, being more slender, with its inner margin concave.

The unique example is probably a female, the metasternum being but little impressed and having only an excessively minute angular prominence on each side of the impression. The ventral rings are rather elongate, except the basal one, the latter in the middle being scarcely so long as the fourth.

BATOCTENUS.

Corpus sat elongatum; caput muticum, absque tuberculis antennariis; antennæ inter se parum distantes, crassiusculæ; oculi magni; prothorax parum elongatus, absque sulculis, ad latus utrinque foveatus; elytra striis discoidalibus subtilibus duabus; abdomen haud marginatum, segmento dorsali primo quam secundum paullo longiore, segmentis ventralibus primis et secundis subæqualibus.

Although closely allied to the polymorphous *Batrisus*, and without any one very salient point of difference, yet the insects I include in *Batoctenus* exhibit so many minor distinctions as to constitute the genus a very distinct one. The palpi are shorter than in *Batrisus*, and with the terminal joint ovate, acuminate; the head is simple, without depressions or any distinct elevation over the antennal insertion; the space separating the antennæ is narrower; the eyes are large and coarsely faceted; on the under surface of the body there is but little difference between the length of the first and the other ventral rings. The rest of the characters very nearly agree with *Batrisus*.

1. **Batoctenus simplex.**

Rufescens, elytris sanguineis; crebrius subtiliter pubescens, parum nitidus; capite opaco, dense subtiliter rugoso-punctato; prothorace fere impunctato.
Long. $2\frac{1}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

The antennæ are dissimilar in the sexes, though joints 2–7 differ but little from one another: in the female the eighth joint differs from the seventh only in being a little longer, the ninth is rather broader, and the tenth still somewhat broader, the terminal joint being elongate, stout, and obtusely acuminate; in the male the eighth joint is oblong and much larger than the seventh, the ninth joint a little larger than the eighth, the tenth shorter than the ninth, the terminal joint very stout. The opaque densely sculptured head has no elevations or depressions except the two indistinct foveæ on the vertex. The thorax is nearly as long as broad; much narrowed behind and still more so in front. The elytra are elongate, and of a brighter red than the rest of the surface; with the shoulders slightly elevated, and a sutural and two fine equidistant dorsal striæ extending the whole length. In addition to the peculiar antennæ, the male is distinguished from the female by the possession of a mucro at the extremity of the middle tibia; and it also has the terminal ventral plate more distinctly impressed.

Four examples.

2. **Batoctenus puncticollis.** (Tab. I. fig. 9, ♂.)

Rufescens, elytris sanguineis, crebrius subtiliter pubescens, parum nitidus; capite opaco, dense subtiliter rugoso-punctato; prothorace disco dense punctato.
Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Though very similar to *B. simplex*, this insect is readily distinguished by the punctate thoracic disc. The sexual distinctions are similar, except that the male of *B. puncticollis* has an additional character in the shape of the front tibiæ, these latter, though slender, becoming slightly broader on the inner face to just below the middle, where they again become narrow.

One pair only was found.

EUPHALEPSUS.

Euphalepsus, Reitter, Verh. z.-b. Ges. Wien, xx. p. 378 (1882).

This genus, though allied in many respects to *Batrisus*, is essentially distinct by the structure of the palpi. It comprises as yet only three Brazilian species in addition to those found in our region; one, recently described by Reitter as *E. longicornis*, has had no locality indicated, but it is not, I believe, from our region.

1. Euphalepsus globipennis.

Euphalepsus globipennis, Reitt. l. c. p. 379[1].

Hab. Mexico, San Marcos (*Bilimek*[1], *mus. Vindob.*).

We have not received this species.

2. Euphalepsus centralis.

Brevis, convexus, sanguineo-castaneus, nitidus, pube erecta vestitus; elytrorum basi et humeris marginato-elevatis; antennis sat elongatis, articulis nono et decimo in latitudine et longitudine subæqualibus.
Long. 2 millim.

Hab. Guatemala, San Gerónimo, Quiche Mountains 7000 to 9000 feet (*Champion*).

Antennæ with joints 3–8 differing little from one another; the ninth joint considerably larger and about as long as broad, the tenth similar to the ninth, the terminal joint rather longer than the preceding two together. Head small; with two short thick antennal tubercles, and behind each of these obscurely foveolate. Thorax small, convex, with a deep transverse sulcus in front of the base, the extremity of the sulcus connected with a short deep longitudinal impression on each side. Elytra broad, convex, the base margined, the shoulders elevated; the humeral elevation not continued backwards along the sides, the basal margin crenulate owing to the three or four punctures or minute foveæ which exist on each side; without discoidal stria, the sutural stria fine; the pubescence very distinct, but the punctuation extremely feeble. Hind body very short, convex, forming in profile a curve almost continuous with the elytra. Legs rather slender.

Only one example was found in each locality; they are apparently male and female, though the differences are but slight: each has the metasternum foveolate at the extremity. The male, from San Gerónimo, has a very minute patch of pubescence on the hind margin of the intermediate femur near the base, the middle tibia slightly denticulate inwardly just below the middle, and the hind tibia with a very minute inflation of its superior face below the middle. The female is remarkable on account of the existence of a conical projection of the dorsal surface of the hind body at the extremity.

3. **Euphalepsus reitteri.** (Tab. I. fig. 8, ♂.)

Brevis, convexus, sanguineo-castaneus, nitidus, pube longa erecta dense vestitus; elytrorum basi et humeris marginato-elevatis; antennis sat elongatis, crassis, clava elongata, articulorum noni et decimi longitudine latitudinem superante.

Long. 2½ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

A single male example only has been obtained. It is closely allied to *E. centralis*, but is larger, with a more dense pubescence, much more largely developed club to the antennæ, and a more elongate head; the sexual characters are also different, the hind legs being longer and thicker and with their tibiæ dilated externally below the middle, the middle femora without a patch of pubescence, and the denticle near the extremity of the middle tibiæ scarcely to be detected.

I have named this elegant species of Pselaphidæ in honour of Herr Reitter, of Vienna, who has contributed more than any other entomologist to our knowledge of this family of minute but extremely curious Coleoptera.

Subfam. *BRYAXINÆ.*

Group **GONIACERINA.**

GONIACERUS.

Goniacerus, Motschulsky, Etudes ent. 1855, p. 17, tab. fig. 8; Reitter, Verh. Ver. Brünn, xx. pp. 188, 206 (1882).

Goniastes, Westwood, Trans. Ent. Soc. Lond. 1870, p. 125.

This genus comprises only a single Amazonian species in addition to the one from our region.

1. **Goniacerus gibbus.**

Goniacerus gibbus, Motsch. l. c.[1]

Hab. PANAMA, Obispo [1].

LISTRIOPHORUS.

Listriophorus, Schaufuss, Nunq. Otios. ii. p. 245; Reitter, Verh. Ver. Brünn, xx. p. 189 (1882).

This genus has not been characterized; it was merely tabulated by Schaufuss. *Listriophorus* comprises only one species, which probably may not belong to our region.

1. **Listriophorus felix.**

Listriophorus felix, Schauf. l. c. p. 289[1].

Hab. ? MEXICO (" wahrscheinlich ")[1].

Group **BRYAXINA.**

CACCOPLECTUS.

Corpus sat elongatum, subdepressum, subparallelum, pube subtili depressa vestitum. Antennæ 11-articulatæ, simplices, vix clavatæ, ad basin inter sese tantum modice distantes. Os subtus situm. Palpi maxillares minuti, articulo ultimo breviter ovali. Caput valde convexum; oculis sat magnis. Prothorax brevis, ante basin transversim impressus. Elytra elongata, striis suturalibus et discoidalibus geminatis impressis. Abdomen late marginatum.

This genus is proposed for an insect that appears anomalous in several respects; it has at first sight the aspect of the "Euplectina," though apparently possessing but little relationship with that group. I am inclined to think *Caccoplectus* would be most naturally located near *Batoctenus*; but, as I cannot discover any trace of a second claw to the tarsus, I am obliged in following Reitter's arrangement to place it in the 'Bryaxina,' to no member of which group has it, so far as I know, any resemblance. Though the mouth is placed on the underside of the head (as in the 'Ctenistina'), yet the latter is quite short, and not at all rostrate, the antennæ being inserted close to the labrum. The maxillary palpi are unusually minute, so that I can only with difficulty obtain a sight of the terminal joint. The hind coxæ are widely separated; the two basal joints of the tarsi very distinct, and setose beneath. The second, third, and fourth ventral rings are similar to one another, and rather elongate, the basal ring being very short.

1. **Caccoplectus celatus.** (Tab. I. fig. 11.)

Testaceo-castaneus, elytris magis sanguineis, pube depressa flavescente vestitus; antennis crassiusculis, articulo 2° parvo, articulis 3°–10^{m} subæqualibus.

Long. 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ stout, the second joint smaller than either of the others, joints 3–10 differing very little from one another, the terminal joint as long as the preceding two together. Head very convex in the middle; antennal tubercles flat, elongate, separated in front only; eyes large, coarsely faceted. Thorax with a transverse impression near the base and behind this, in the middle, a short longitudinal depression in front of the scutellum; a longitudinal impression also on each side. Elytra elongate, narrowed, though not in the least raised, at the shoulders; the discoidal stria consisting of two very fine, rather widely separated lines, and the sutural stria also having the appearance of being limited on each side by a very fine line. The hind body is densely pubescent.

The unique example found is presumed to be a male, the middle femora being dilated so that their base is very much wider than the trochanter and exhibits a slight obtuse angle.

DECARTHRON.

Decarthron, Brendel, Proc. Ent. Soc. Phil. vi. p. 35 (May 1866); Reitter, Verh. Ver. Brünn, xx. p. 189 (1882).

This genus is peculiar to the New World; only a few species have been described

as yet, though *Decarthron* ranges from the United States of North America to the tropics.

§ 1. *Thorax with a lateral fovea on each side.*

1. **Decarthron suturale.**

Bryaxis suturalis, Schauf. Sechzig neue Pselaph. p. 17 [1].

Hab. Mexico [1].

2. **Decarthron cochlearifer.**

Bryaxis cochlearifer, Schauf. Sechzig neue Pselaph. p. 9 [1].

Hab. Mexico [1], Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Calderas, Dueñas, Torola (*Champion*).

§ 2. *Thorax without lateral foveæ.*

3. **Decarthron fallaciosum.** (Tab. I. fig. 12.)

Læte rufo-testaceum, nitidum; pedibus testaceis; antennis palpisque gracilibus.
Long. $1\frac{3}{4}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cahabon (*Champion*).

Antennæ slender and long; none of the joints transverse—4–7 very similar to one another, the eighth stouter and about as long as broad, the ninth still broader and about as long as wide, the tenth broader than the ninth, as long as the preceding two together, and emarginate on one side near the tip. Head with two very large foveæ between the eyes. Thorax subglobose, with a small distinct fovea in front of the scutellum. Elytra with the sutural stria very deeply excavated at the base, and with the discoidal stria extending one half the length; with a moderately large intra-humeral impression. First dorsal segment with a very distinct plica on each side, extending more than half the length of the segment.

The unique Mexican example is, I presume, a male, as there is a very slight angular swelling of the front upper margin of the middle femur. From Guatemala also only a single example has been received; though much mutilated it apparently agrees exactly with the Mexican type. The elongate antennæ and comparatively large size of this species give it an extreme resemblance to *Bryaxis*.

4. **Decarthron restitutum.**

Læte rufo-testaceum, nitidum, subtiliter pubescens; antennis parum elongatis.
Long. $1\frac{1}{2}$ millim.

Hab. ? Mexico, Cordova (*Sallé*); Guatemala, Rio Naranjo, near the city, Rio Maria Linda, Torola, San Gerónimo (*Champion*); ? Nicaragua (*Sallé*).—? Amazons.

This species at first sight resembles *D. cochlearifer* exactly, but besides wanting the lateral fovea on the thorax, is distinguished as follows:—it is slightly smaller, and

with less swollen maxillary palpi, and has a narrower head, the two foveæ on the vertex being consequently less distant. It also possesses well-marked male characters; in this sex the middle femur is angularly swollen to beyond the middle and beyond this emarginate-foveolate; and the front tibia also is a little angularly dilated above.

The Mexican habitat of this species, as well as the Nicaraguan one, rests in each case on a single female; both require confirmation. I have also a female found by Prof. Trail in the Amazons valley that apparently belongs to this species.

5. Decarthron similare.

Læte rufo-testaceum, nitidum, subtiliter pubescens; antennis parum elongatis.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Champerico (*Champion*).

This species is distinguished from *D. restitutum* apparently only by the sexual characters, these being very different. The male has the middle femur inflated to beyond the middle, and with the extremity subconstricted; the middle tibia has a thick mucro at its internal apical angle; and the metasternum has a broad depression in the middle behind, the depression densely covered with an extremely fine, pallid, silky pubescence.

The unique example was found upon the sea-coast.

6. Decarthron curticorne.

Bryaxis curticornis, Schauf. Nunq. Otios. ii. p. 263 [1].

Hab. MEXICO, Yucatan [1].

7. Decarthron denticorne.

Bryaxis denticornis, Schauf. Sechzig neue Pselaph. p. 15 [1].

Hab. MEXICO, Yucatan [1].

The condition of the thorax is not described, and I therefore can only guess at the position of the species. *D. denticorne* has apparently a peculiar structure of the head.

BRYAXIS.

Bryaxis, Leach, Zool. Misc. iii. p. 85 (1817); Leconte, Tr. Am. Ent. Soc. viii. p. 181 (1880); Reitter, Verh. Ver. Brünn, xx. p. 190 (1882).

This is a very extensive genus of which more than two hundred species have already been described; it has a very wide distribution. Reitter (*l. c.*) does not admit in *Bryaxis* any form that has not a dorsal stria as well as a sutural stria on each elytron; but in the species of our region we have the passages from a delicate dorsal stria to its complete absence; I have therefore been obliged to abandon the use of this character as being of generic importance. The species I have placed in the second section are most probably not really congeneric with those of the first section; but as they are

far from agreeing *inter se*, except in the negative character of wanting the lateral thoracic foveæ, and as no sufficient material has been obtained for the investigation of these minute forms, I am obliged to leave them in *Bryaxis* at present.

§ 1. *Thorax with a well-marked lateral fovea on each side; elytra usually with a dorsal stria.*

1. Bryaxis celata.

Rufo-testacea, nitida, subtiliter pubescens; antennis tenuibus; prothorace basi in media foveola punctiformi, utrinque foveola multo majore; abdominis segmento basali haud elongato, quam secundum dimidio longiore.

Long. $1\frac{2}{3}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, near the city (*Champion*); NICARAGUA, Managua (*Sallé*).

Antennæ quite slender; joints 3–8 similar to one another, small, the fifth joint only slightly longer than those adjoining it, the ninth small, though slightly larger than the preceding one, the tenth larger than the ninth, as long as broad, the terminal joint still larger. Head without fovea in front, but slightly depressed between the antennæ, the vertex with two large foveæ. Thorax broader than long. Elytra with an entire sutural stria, and with a fine discoidal stria extending more than half the length. First abdominal segment with a short plica on each side. The male is distinguished by the existence of a long depression at the apex of the hind body beneath.

This species is extremely similar to the female of *B. reichei*, but the tenth joint of the antennæ is smaller; the head is more elongate, and somewhat depressed between the insertion of the antennæ, and has no fovea there; the lateral fovea of the thorax is larger, and the pubescence though very fine is not so extremely minute. Only one example has been received from Mexico; Mr. Champion, however, met with a small series in Guatemala, and M. Sallé a single specimen in Nicaragua.

2. Bryaxis parviceps.

Rufo-testacea, nitida, subtiliter pubescens; antennis tenuibus, modice elongatis; capite brevi trifoveolato, foveola frontali magna; prothorace basi in media foveola punctiformi, utrinque foveola majore; elytris stria discoidali valde abbreviata; abdominis segmento basali sat elongato, quam secundum duplo longiore.

Long. vix $1\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Paso Antonio (*Champion*); PANAMA, near the city (*Champion*).

Though very similar to *B. celata*, this species is distinguished by the smaller head, with large frontal fovea; the smaller lateral fovea of the thorax; the more abbreviated discoidal stria of the elytra; the longer basal segment of the hind body; and the hind margin of the wing-cases pubescent in the middle. This latter character is wanting in the female of *B. reichei*, which also has only a minute fovea on the front of the head.

B. parviceps still more closely resembles *Decarthron cochlearifer*, but has the antennæ more slender, and with eleven joints instead of ten, and a less elongate first segment to the hind body. The male is distinguished by an elongation of the fifth and sixth joints of the antennæ, and a slight asymmetry of the seventh and eighth joints.

I have seen four examples from Mexico, these being mixed in Sallé's collection with *Decarthron cochlearifer*, two from Guatemala, and one from the State of Panama.

3. **Bryaxis crassipalpis.**

Piceo-rufa, nitida, elytris sanguineis, antennis pedibusque rufis, subtiliter pubescens; capite angusto, utrinque supra antennas fortiter elevato, vertice bifoveolato; prothorace transverso, basi in media foveola parva, utrinque foveola multo majore; elytris stria discoidali ultra medium abbreviata; abdominis segmento basali elongato, quam secundum plus duplo longiore.
Long. 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

This species is readily distinguished by the strong elevation over each antenna, and the surface being foveolate between the excavations; it also has the palpi thicker than ordinary, and more like what exists in *Decarthron*, from which genus it is in fact solely distinguished by the eleven-jointed antennæ. These last-named organs are slender, with quite short basal joint, the fourth joint slightly, the fifth distinctly, elongate, the three following joints small, and the three terminal joints forming a slender club.

The unique example is probably a female. The pubescence in *B. crassipalpis* is fine but somewhat elongate, and not so extremely minute as in *B. sallæi* and its allies.

4. **Bryaxis pubescens.**

Bryaxis pubescens, Schauf. Sechzig neue Pselaph. p. 16 [1].

Hab. MEXICO [1].

This insect is stated to have the head trifoveolate, the foveæ adorned with white setæ, and to be $1\frac{2}{3}$ millim. long; these characters would bring the species near *B. rubecula*, but the sixth joint of the antennæ is stated to be as long as the preceding two together, whereas in *B. rubecula* this joint is shorter than the fifth alone.

5. **Bryaxis nominata.**

Fem. Rufo-testacea, nitida, convexa, subtilissime pubescens; antennarum articulo quinto præcedentibus duobus æquali; capite elongato, nitido, impunctato, anterius plano, vertice bifoveolato; prothorace basi in media minute foveolato, utrinque foveola majore; elytris stria suturali aliaque discoidali ante apicem abbreviata impressis; abdominis segmento basali sat elongato, quam secundum haud duplo longiore.
Long. 2 millim.

Hab. GUATEMALA, Dueñas (*Champion*).

We have received only females of this species, but it is clearly quite different from any other noticed here; in its bright colour it resembles *B. celata* and *B. parviceps*, but the head is quite flat in front, and the eyes are not placed so near to the vertex; the

antennæ have the fifth joint strongly, the sixth slightly, elongate, the club rather stout; the thorax is subglobose, about as long as broad. From the corresponding sex of *B. reichei* the present insect is distinguished by its larger size; the more elongate head, without fovea in front; and by the fifth joint of the antennæ longer than the sixth.

6. **Bryaxis reichei.**

Bryaxis reichei, Schauf. Nunq. Otios. ii. p. 264 [1].

Hab. Guatemala [1] (*Sallé*), near the city, San Gerónimo (*Champion*).—South America, Colombia [1].

Schaufuss's description applies to the male only; the female has the antennæ slender and simple, and with the fifth and sixth joints equal and a little elongate. The species is readily distinguished by the head being flat, and having a minute but quite definite fovea in front between the insertion of the antennæ.

7. **Bryaxis sallæi.** (Tab. I. fig. 13.)

Piceo-rufa, elytris rufo-sanguineis, convexa, subtilissime pubescens; antennis maris articulis quinto sextoque incrassatis; capite brevi trifoveolato, foveola frontali magna; prothorace basi in media foveola punctiformi, utrinque foveola majore; elytris stria discoidali abbreviata; abdominis segmento basali sat elongato, quam secundum vix duplo longiore.

Long. 2 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil 4000 to 5000 feet, Senahu (*Champion*); Panama, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

I have what I suppose to be the sexes of this species before me. The male has the third and fourth joints of the antennæ small, the fifth large, swollen, and with its front margin polished and foveolate, the sixth joint also is enlarged though much smaller than the fifth, the seventh and eighth joints are of normal form, while the three terminal joints form an elongate club, gradually thicker from the base to near the apex. The front of the head is strongly elevated so as to give the appearance of a large fovea between the antennæ; the very fine elytral stria extends about half the length; the hind margin of the wing-cases is only exceedingly minutely pubescent in the middle; and scarcely any plica can be detected on the first dorsal segment. Beneath the metasternum is hollow in the middle, tuberculate-prominent on either side.

Of this species we have unfortunately not received males and females from the same locality. The former sex exhibits some slight variation in the structure of the antennæ, possibly of a local character, but sufficient evidence has not been obtained as to this. The female sex is represented by a good series from Senahu; these examples agree closely with what I take to be the male of the same species, except in colour, and in the fifth and sixth joints of the antennæ not being swollen though they are a little elongate, the fifth being the longer of the two.

8. **Bryaxis intacta.**

Picea, elytris piceo-rufis, convexa, subtilissime pubescens; antennis maris articulo quinto valde inflato; capite nitido, trifoveolato, foveola frontali magna; prothorace basi in media foveola punctiformi, utrinque foveola majore; elytris stria discoidali apicem haud attingente, stria suturali integra; abdominis segmento basali sat elongato, quam secundum fere duplo longiore.

Long. 2 millim.

Hab. GUATEMALA, Cahabon 1000 feet (*Champion*).

The male of this species has the fifth joint of the antennæ greatly enlarged and foveolate-impressed in front, all the other joints being normal, the sixth, seventh, and eighth small, slender, and subequal, the terminal three joints forming an elongate very slender club; it also has a conspicuous mucro directed inwards on the middle tibia just above the apex.

The male of *B. intacta* is readily distinguished from the same sex of *B. sallæi* by the structure of the antennæ; the female is unknown. Unique.

9. **Bryaxis diversicornis.**

Picea, elytris piceo-rufis, convexa, subtilissime pubescens; antennis maris articulis quinto sextoque incrassatis; capite brevi trifoveolato, foveola frontali magna; prothorace basi in media foveola punctiformi, utrinque foveola multo majore; elytris stria discoidali omnino obsoleta; abdominis segmento basali sat elongato, quam secundum haud duplo longiore.

Long. 2–2$\frac{1}{3}$ millim.

Hab. GUATEMALA, Sabo in Vera Paz (*Champion*).

This insect is very closely allied to *B. sallæi*, but has the discoidal stria of the elytra quite obsolete, and the antennæ of the male more peculiarly formed; in this sex the fifth antennal joint forms an irregular triangle, and is curvate and hollow in front, and the sixth joint is transverse; in the female the fifth and sixth joints are not dilated, but the fifth is as long as the preceding two together, and the sixth intermediate in length between the fifth and seventh; the male has the metasternum angularly prominent on either side, subexcavate between the prominences. There is a very slight intrahumeral depression on the wing-case, but no discoidal stria, the sutural stria being present as usual.

Only three examples were obtained.

10. **Bryaxis rubecula.**

Fem. Rufo-testacea, convexa, nitida, subtiliter pubescens; antennis tenuibus, articulo quinto vix elongato, tertio æquali; capite argute trifoveolato, foveolis omnibus pubescentibus; prothorace subgloboso, basi in media foveola punctiformi, utrinque foveola majore; elytris stria discoidali omnino obsoleta; abdominis segmento basali sat elongato, quam secundum vix duplo longiore.

Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Los Remedios (*Champion*).

Although we have received only females this is clearly a distinct species, and the absence of a definite discoidal stria induces me to place it next *B. diversicornis*; it is

distinguished by the large definite fovea on the front of the head being similar to the two foveæ on the vertex, and like them finely pubescent; the slender intermediate joints of the antennæ and the different proportions of these joints are also important diagnostic characters.

The three examples obtained are unfortunately in a bad state of preservation.

11. **Bryaxis designata.**

Piceo-rufa, elytris rufo-sanguineis, antennis pedibusque rufis, convexa, subtilissime pubescens; antennis maris articulis quinto sextoque elongatis, leviter incrassatis; capite punctulato, bifoveolato, vertice inter foveolas convexo; prothorace basi in media minutissime foveolato, utrinque foveola majore; elytris stria suturali aliaque discoidali impressis; abdominis segmento basali sat elongato, quam secundum vix duplo longiore.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

Head not foveolate in front, but with the vertex convex in the middle, the convexity extending forwards but not reaching the front, on either side of the convexity a small and shallow fovea. Thorax rather slender, as long as broad; with a very minute fovea at the base in the middle, and also a large distinct one on each side. The discoidal stria of the elytra is curvate, very fine, and extends more than half the length, though not reaching the hind margin. In the male the antennæ have the fifth and sixth joints about equal in length, each about as long as 2–4 together, and a little thicker than those near them, and joints 9–11 form a long slender club; in the female joints 5 and 6 are elongate, but not thicker than the contiguous joints, each as long as the seventh and eighth together. The male has the metasternum distinctly impressed, while in the female it is flat behind.

Mr. Champion secured seven examples of this insect.

12. **Bryaxis diversa.** (Tab. I. fig. 14.)

Rufo-testacea, elytris rufis, convexa, nitida, subtilissime pubescens; antennis maris articulis quinto sextoque elongatis, leviter dilatatis; capite plano, trifoveolato, foveola frontali in clypei margine anteriore sita; prothorace subgloboso, utrinque foveola parva, basi in media haud foveolata; elytris stria suturali aliaque discoidali ante apicem abbreviata, impressis; abdominis segmento basali sat elongato, quam secundum haud duplo longiore.

Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, San Feliz, Tolé (*Champion*).

Allied to *B. reichei*, but distinguished by the absence of a fovea on the base of the thorax, by a slight difference in the front of the head, and very different male antennæ. On careful examination a very minute puncture can be detected in the position usually occupied by the median thoracic fovea. The front of the head is flat and shining, and appears slightly emarginate at the edge in front; on the deflexed anterior part there is a small fovea. In the male the fifth joint of the antennæ is distinctly enlarged, and the sixth joint is still larger. At the extreme base of the elytron there is a puncture

between the sutural and discoidal striæ, as well as a puncture at the base of each of these striæ.

Seven examples; these were found on the sandy banks of streams.

§ 2. *Thorax without lateral foveæ; elytra without dorsal stria.*

13. **Bryaxis pusilla.**

Bryaxis pusilla, Schauf. Sechzig neue Pselaph. p. 15 [1].

Hab. Mexico [1].

This species is said to be nearly or quite without lateral foveæ on the thorax, and to be scarcely 1 millim. long.

14. **Bryaxis cristata.**

Bryaxis cristata, Schauf. Sechzig neue Pselaph. p. 14 [1].

Hab. Mexico [1].

The thorax of this insect is stated to have a very fine crest in front of the scutellum; the lateral foveæ absent, or rather replaced by a fine linear impression composed of confluent punctures; the head to be only depressed between the antennæ (as in *B. celata*); the length $1\frac{1}{4}$ millim.

15. **Bryaxis bythinoides.**

Castanea, subtiliter pubescens; antennis tenuibus, distantibus; capite brevi, lato, bifoveolato; prothorace transverso, basi in media minutissime foveolata, lateribus haud foveolatis; elytris intra humeros foveolatis, stria suturali integra, stria discoidali nulla; abdominis segmento basali parum elongato, lateribus haud alte marginatis.

Long. vix $1\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

Antennæ with small third joint which, however, is longer than the fourth, joints 4–8 each quite small and slender, the ninth slightly larger, the tenth transverse, the terminal joint acuminate and longer than the preceding two together. Head broad and short, the vertex with two large but indefinite foveæ, the front depressed but not foveolate. Thorax short, strongly narrowed behind. Elytra of a rather darker castaneous colour than the head and thorax; with a rather large fovea at the shoulders, and a very deep sutural stria. Legs slender and rather short. In the male the intermediate ventral rings are so abbreviated as to be almost invisible, and the apex is occupied by a deep transverse fissure.

One example from each locality.

16. **Bryaxis impressicollis.**

Nigro-picea, convexa, parce subtiliter pubescens, nitida; antennis, palpis pedibusque sordide testaceis, illis

brevibus; capite brevi, fronte transversim lineariter depresso, vertice bifoveolato; prothorace anterius profundissime transversim depresso, basi in media minutissime foveolata; elytris intra humeros depressis, stria suturali integra, discoidali nulla; abdomine subtiliter marginato, segmento basali haud elongato.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ short, with a stout club; joints 3–8 minute, the eighth being exceedingly short, the ninth joint small, transverse, the tenth much broader and also transverse, the terminal joint stout, acuminate. Palpi rather long, with slender terminal joint. Head small, with two large foveæ on the vertex, the extreme summit slightly notched in the middle, the front margin thickened and with a linear depression behind the incrassation. Thorax small, much narrowed in front and behind; with an extremely deep transverse depression extending all across it in front, and an exceedingly minute punctiform fovea in front of the base. Elytra elongate, convex; the extreme base internal to the shoulder depressed. First dorsal ring not much longer than the second.

Of this Bythinoid insect only a single example was secured.

17. **Bryaxis vulnerata.** (Tab. I. fig. 15.)

Castanea, subtiliter pubescens; antennis brevibus; prothorace transverso, medio profunde irregulariterque depresso, basi in media minutissime foveolata; elytris intra humeros depressis, stria suturali integra, discoidali nulla; abdomine subtiliter marginato, segmento basali haud elongato.
Long. $1\frac{1}{4}$ millim.

Hab. PANAMA, Tolé (*Champion*).

Antennæ short and slender, with rather large club; joints 4–8 minute, subequal, the terminal three gradually forming a club. Head short, moderately broad, the front of the clypeus a little raised and with a slight antennary tubercle; bifoveolate between the eyes, the extreme vertex in the middle slightly notched or depressed. Thorax broad and short, much narrowed behind; with a very large and deep depression formed as it were of three depressions united, the larger on the disc, the smaller one a little nearer the front on each side. Elytra with a distinct sutural stria and a well-marked intra-humeral depression.

Allied to *B. impressicollis*, though with a differently formed thorax; also unique.

18. **Bryaxis simulatrix.**

Castanea, nitida, lævigata; antennis tenuibus, clava uni-articulata; capite utrinque foveolato, tuberculis antennariis discretis; prothorace basi in media minute foveolato; elytris stria suturali integra; abdomine brevissimo, segmento basali parum elongato, ceteris deflexis.
Long. $1\frac{1}{3}$ millim.

Hab. GUATEMALA, Paraiso (*Champion*).

Antennæ slender; joints 3–10 minute, similar; the terminal joint forming a rather large club, acuminate. Head small. Thorax rather elongate, the base produced in front of the scutellum; with a very minute fovea in the middle close to the base.

Of this very distinct insect one immature example was found. It is no doubt a male, and has the front legs much incrassate, the femora being much swollen and the tibiæ less so; the middle femora are also incrassate to a less extent; the metasternum is broadly depressed on the middle; and the actual apex of the hind body is occupied by a deep depression.

Leconte established a genus *Eutrichites* for a minute *Bryaxis*-like insect with uniarticulate club, and a condition of the elytral striæ similar to that existing here; but his genus is stated in addition to have the antennæ approximate, and therefore I cannot place *B. simulatrix* in it. The difficulty of examining so minute an insect is increased in the present case by the immature condition of the solitary exponent, and by its wings being protruded.

19. **Bryaxis trimioides.** (Tab. I. fig. 16.)

Angustula, nitida, lævigata, rufo-castanea, elytris sanguineis; antennis brevibus, clava majore; capite lævigato, plano, vertice tantum minute obsoleteque bifoveolato; prothorace angustulo, inimpresso; elytris stria suturali integra, intra humeros ad summam basin foveolatis; abdomine subtiliter marginato, segmento basali quam secundum paullo longiore.

Long. $1\frac{1}{3}$ millim.

Hab. GUATEMALA, Zapote, Senahu, Tamahu (*Champion*).

Antennæ short, with the intermediate joints minute; the terminal three joints gradually forming a club, the last joint being stout. Head smooth, flat and shining, the clypeus slightly incrassate on each side; near each eye is a small very obscure fovea. Thorax small, a little narrowed behind, its greatest width in front of the middle; polished and shining. Elytra without sutural stria, with a small fovea at the extreme base within the shoulder.

Three examples.

20. **Bryaxis impubis.**

Subnitida, rufo-castanea; antennis brevibus, clava majore; capite margine anteriore incrassato, utrinque inter oculos vage impresso; prothorace brevi, inimpresso; elytris haud foveolatis, stria suturali impressa; abdomine brevi, segmento basali haud elongato, quam secundum paullo longiore.

Long. 1 millim.

Hab. GUATEMALA, Tamahu (*Champion*).

Antennæ short, with joints 3–8 small, the ninth and tenth joints also small, broader than the preceding, and strongly transverse, the terminal joint very large and acuminate. Head small, with the clypeus elevated; a depression on each side near the eye. Thorax small, short, a good deal narrowed behind, with a single minute puncture in the middle in front of the base. Elytra obsoletely punctulate, without basal impressions, but with a moderately deep sutural stria.

This species at first sight closely resembles *B. trimioides*, but is really very distinct; the antennæ have the ninth and tenth joints smaller, so that it is difficult to decide whether

the club should be called uni-articulate or three-jointed; the head is differently formed, the thorax shorter, and the elytra exhibit a slight sculpture. It is unique.

21. **Bryaxis œdipus.**

Rufo-castanea, elytris sanguineis, omnino minutissime pubescens, sat nitida; antennis brevibus, clava magna; capite anterius impresso, utrinque inter oculos minute foveolato, vertice subconvexo; prothorace brevi; elytris stria suturali subtiliter impressis, intra humeros obsoletissime depressis; abdominis segmento basali quam secundum duplo longiore; tarsis anterioribus (? maris) articulo basali crassiore.

Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA (*Sallé*).

Antennæ with joints 3–8 small, the ninth and tenth joints also small, but transverse, the terminal joint very large, acuminate. Head transversely depressed in front, the clypeus being angulate in the middle and depressed; on each side near the eye is an obscure fovea, which is only indistinctly separated from the frontal depression. Thorax short and broad, much narrowed behind, without foveæ, the base slightly transversely depressed. Elytra with only a fine sutural stria, and a very feeble impression at the shoulder.

This insect also is unique; it is allied to *B. impubis*, though abundantly distinct. The example is probably a male, the metasternum being broadly impressed, and it is very probable that the peculiar swelling of the front tarsus may be peculiar to this sex.

PSELAPTUS.

Pselaptus, Leconte, Tr. Am. Ent. Soc. viii. p. 184 (1880).

This genus was established for a Texan insect, and distinguished from *Bryaxis* by the absence of striæ from the elytra. The single species from our region agrees with *Pselaptus* in this respect, but whether it be really congeneric with *P. belfragei*, Lec., must remain doubtful at present.

1. **Pselaptus batrisoides.** (Tab. I. fig 17.)

Convexa, lævigata, polita, rufa, elytris dilute sanguineis; antennis gracilibus, clava valde elongata; capite anterius subimpresso, utrinque inter oculos foveola minuta; prothorace inimpresso; abdominis segmento basali quam secundum vix duplo longiore.

Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Reposo (*Champion*).

Antennæ rather slender, joints 3–8 small, the ninth joint slightly broader, as long as wide, the tenth joint a little larger but similar, the terminal joint very long. Head rather broad and short, rather vaguely impressed in front, and with a small obscure fovea on each side. Thorax nearly as long as broad, smooth, and shining. Elytra convex, polished, without foveæ or striæ. Legs elongate.

Unique.

Subfam. *PSELAPHINÆ.*

PSELAPHUS.

Pselaphus, Herbst, Natursyst. bek. ausl. Ins. Käf. iv. p. 106 (1792).

This distinct genus is widely distributed over the world, and comprises at present about seventy described species.

1. **Pselaphus longiceps.** (Tab. I. fig. 18.)

Latus, castaneus, elytris sanguineis; capite antennarumque articulo basali elongatis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Head elongate, dull, depressed between the eyes. Antennæ with the first joint as long as the following four joints together; the terminal joint elongate, nearly equal in length to the preceding four united. Palpi very elongate; second joint very long and slender, rather tortuous, and with a slender apex; third joint small; fourth joint with delicate basal stalk, about equal in length to the slender apical dilatation. Thorax slender, much rounded at the sides, without impressions. Elytra gradually narrowed from the apex to the base, shining red, with well-marked sutural stria. Prosternum in front of the coxæ densely covered with glandular pubescence; its hind margin and the base of the hind body each with a band of similar pubescence.

The unique example of this very distinct species is probably a female.

PSELAPHOMORPHUS.

Pselaphomorphus, Motschulsky, Etudes ent. 1855, p. 15, tab. f. 7.

Nothing I believe is known as to this genus beyond Motschulsky's imperfect figure and few words of description; but the insect is apparently very different from *Pselaphus* by its palpi. Possibly these organs have been mutilated.

1. **Pselaphomorphus sculpturatus.**

Pselaphomorphus sculpturatus, Motsch. l. c.[1]

Hab. PANAMA, Obispo [1].

Subfam. *EUPLECTINÆ.*

Group **EUPLECTINA.**

CANTHODERUS.

Canthoderus, Motschulsky, Etudes ent. 1855, p. 15, tab. f. 6; Reitter, Verh. Ver. Brünn, xx. p. 194 (1882).
Stratus, Schaufuss, Nunq. Otios. ii. p. 246 (1872).

I accept on Reitter's authority these two names as representing one genus. Reitter has not, however, informed us that the species of Schaufuss is the same as that of Motschulsky, and as the localities whence they were respectively obtained are so distant, the two insects are possibly distinct. Motschulsky's figure is very defective, and there is no specific description, so that his species can only be identified by comparison with the type.

1. **Canthoderus villosus.**

Canthoderus villosus, Motsch. Etudes ent. 1855, p. 15. tab. f. 6[1].

Hab. Panama, Obispo[1].

2. **Canthoderus ursinus.**

Stratus ursinus, Schauf. Nunq. Otios. ii. p. 246[1].

Hab. Mexico, "Yucatan au Teapa"[1].

APOTHINUS.

Caput parvum, anterius utrinque maxime elevatum, elevationibus in medio conjunctis. Antennæ sat approximatæ, undecim-articulatæ; clava elongata, bi-articulata. Palpi maxillares articulo ultimo ovali, gracili. Prothorax inæqualis, posterius angustatus. Abdomen segmentibus basalibus æqualibus.

This genus is proposed for an insect of *Euplectus*-like appearance, but with a different form of head and antennæ, these latter being less widely separated. The head is narrow in front; and has on each side of the front margin a distinct elevation which meets its fellow of the opposite side in the middle, so as to form a single prominence, the surface behind this appearing greatly depressed. The antennæ have a stout basal joint; they become gradually broader from the fifth joint to the ninth, these joints being transverse; the tenth joint is quadrate, the terminal joint elongate. The eyes are small. The thorax is much contracted behind; and has a deep irregular transverse depression in front of the base, as well as a longitudinal impression on each side, and another impression near the front. The elytra possess a sutural stria, a very abbreviate dorsal stria, and a well-marked stria within the epipleural margin. The hind coxæ are contiguous. The tarsi are quite short, and possess a single claw.

1. **Apothinus impressifrons.**

Rufo-obscurus, elytris castaneis; capite anterius profundissime depresso; prothorace punctulato.
Long. $1\frac{7}{8}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ with the second joint much longer than the third, the latter very small. Head with a fovea on the middle of the vertex, the fovea connecting in front with the very deep frontal impression. Thorax complexly and irregularly impressed at the base; with a short longitudinal impression on each side, and another depression on the disc in front of the middle. Elytra with strong humeral elevations; margined at the base,

and with a short plica between the deep sutural stria and the shoulder extending backwards from the basal margin. The basal dorsal segment of the hind body is very deeply impressed on the middle, close behind the stria.

The unique example is no doubt a male, as it has a transverse depression on the second, third, and fourth ventral rings; the fifth ring is extremely short in the middle.

2. **Apothinus obscurus.** (Tab. I. fig. 19.)

Castaneus, antennis pedibusque testaceis; antennis minus crassis, articulo nono fortiter transverso et præcedentibus evidenter latiore; prothorace parce punctato.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo, Capetillo (*Champion*).

Antennæ with joints 3–8 small; the ninth joint extremely short, but evidently broader; the tenth joint considerably broader and much longer than those preceding, the latter transverse; the eleventh joint large, obtusely acuminate. Head very small, the surface deeply depressed behind the front; eyes small. Thorax small, contracted behind; with an impression behind the middle, another in front of the middle, and another on each side, the lateral margin finely crenate. Elytra with a deep sutural stria, a short humeral fold, and a short fold between these. The male has the metasternum impressed, and a longitudinal impression at the extremity of the hind body. The punctures on the thorax of the female are very few and distant.

One example from each locality. This species is very much smaller than *A. impressifrons*, and has the antennæ with a shorter club, which, moreover, is almost tri-articulate.

EUPLECTUS.

Euplectus, Leach, Zool. Miscell. iii. p. 80 (1817).

This is a very widely distributed genus containing a large number of described species.

1. **Euplectus guatemalenus.**

Subparallelus, depressus, dilute castaneus, elytris testaceo-castaneis; capite quadrato, maxime impresso; prothorace elongato, basin versus fortiter angustato, profunde impresso.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Antennæ short, with the ninth and tenth joints transverse; the terminal joint short, obtusely pointed. Head broad; with a large, deep, quadrate depression on the front, the depression entire anteriorly, but divided behind by a prolongation from the vertex. Thorax elongate; with a deep lateral impression on each side just behind the broadest part, and a large deep longitudinal impression on the middle, this latter being connected on either side with the lateral impression. Elytra with a deep impression within the shoulder, and a well-marked sutural stria.

This insect is allied to the European *E. signatus*, but has a larger and more quadrate head, and more elongate thorax. The unique exponent is probably a female.

2. **Euplectus solitarius.**

Rufo-castaneus, antennis pedibusque testaceis; antennis tenuibus, clava fere uni-articulata, articulis nono decimoque parvis; capite minore, subquadrato, utrinque impresso, impressionibus tantum anterius ad clypei marginem ipsum conjunctis.

Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

This species is readily distinguished by the structure of its antennæ, these organs differing but little from those of the genus *Trimium*, except that the terminal joint is not so large. The clypeal margin is raised in front, and the lateral depressions are connected by a transverse depression immediately behind the raised margin. The thorax is small, much contracted behind; with a sinuous transverse depression in front of the base, and an obscure depression on the disc just in front of the middle. The elytra possess a sutural stria, but are not foveolate at the base.

Unique.

TRIMIUM.

Trimium, Aubé, in Guérin's Mag. Zool. 1833, Mon. Pselaph. p. 44, t. 88. f. 2.

This genus comprises about twenty species of European and North-American insects, all of very minute stature. Reitter states that most, if not all, of the New World species should be referred to *Trimiopsis*; but I find in our region one that should, I think, clearly be retained in *Trimium* if the two genera are accepted as distinct.

1. **Trimium concolor.**

Castaneum, nitidum, angustulum; capite utrinque anterius profundissime depresso; prothorace posterius impresso; elytris basi quadrifoveatis.

Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,000 feet (*Champion*).

Antennæ slender, with the intermediate joints very minute, the penultimate joints extremely short and very strongly transverse; the terminal joint very large, elongate and stout, acuminate. Head subquadrate, as broad as or slightly broader than the thorax, the eyes anteriorly placed, with a very deep depression on each side extending far forwards. Thorax small, strongly narrowed behind; with a very deep transverse depression extending across the basal portion. Elytra rounded at the shoulders; with a deep elongate fovea just inside the shoulder, and a second rather smaller fovea at the base just outside the sutural stria. Basal segment of the hind body considerably longer than the following segment. The male is a little broader than the female, and has the penultimate ventral ring extremely abbreviate, the terminal ring with a deep definite impression.

TRIMIOPSIS.

Trimiopsis, Reitter, Deutsch. ent. Zeit. xxvi. p. 149 (1882).

This genus is scarcely sufficiently distinct from *Trimium*, the character on which it is founded—viz. the comparative lengths of the segments of the hind body—being liable to considerable variation in *Trimium* as well as in *Bryaxis*, *Batrisus*, and other genera of this family. Most of the species have, however, a more *Euplectus*-like build than the species of *Trimium*, and the genus may be retained at present. It is as yet peculiar to the New World, where it is probably widely distributed.

1. **Trimiopsis mimula.**

Testacea, minus lata, convexa; capite haud lato, anterius angustato, utrinque sat profunde impresso.
Long. 1 millim.

Hab. GUATEMALA, near the city, Capetillo (*Champion*).

Antennæ short, the first joint very short, the second large; joints 3–8 similar, each small, scarcely transverse, the ninth and tenth very short, transverse; the terminal joint very large, three or four times as broad as the joints preceding it, and quite as long as five or six of them united. Head small, elongate, with a moderately deep impression on each side. Thorax small, about as broad as the head, longer than wide, much narrowed behind, with a deep impression in front of the base. Elytra narrowed at the shoulders; with a deep sutural stria, which is still deeper at the base, and a deep intra-humeral depression. First dorsal segment of the hind body scarcely longer than the following one.

This species is extremely similar to *Trimium concolor*, but is readily distinguished by the shorter basal segment of the hind body; moreover, it has the head smaller and with the impressions smaller and shallower.

Two examples were met with at Capetillo and one near the city of Guatemala. From the absence of any conspicuous marks I conclude they may be all females. *T. mimula* is closely allied to *T. clypeata*, Reitter, but is rather larger, and with the thorax longer and less constricted behind.

2. **Trimiopsis minuta.** (Tab. I. fig. 20.)

Brevis, testaceo-castanea; capite transversim subquadrato, utrinque anterius sat profunde impresso.
Long. $\frac{7}{8}$ millim.

Hab. GUATEMALA, El Reposo (*Champion*).

Antennæ very short; the terminal joint very broad, extremely short oval, and only slightly acuminate. Head transverse-quadrate, the hind angles very definite, with a rather shallow and indefinite fovea on each side in front. Thorax short and broad, but narrower than the head, much contracted behind, and with a short transverse impression in front of the base. Elytra short and broad, quadrifoveate at the base.

Eight examples. I do not detect any sexual distinction.

3. **Trimiopsis clavicornis.**

Rufo-castanea, subtiliter pubescens; antennis articulo decimo magno, undecimo acuminato; capite transversim subquadrato, anterius profunde depresso, clypeo elevato.
Long. $1\frac{2}{5}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Antennæ very short, the ninth joint very strongly transverse, the tenth joint large, much larger than the preceding one, very strongly transverse, as broad as the base of the large terminal joint; this latter strongly acuminate, and slightly irregular in form, one side being rather more curvate than the other. Head short and broad, largely and deeply impressed in front, the more elevated vertex projecting as an angle into the depression, the clypeal margin largely raised. Thorax rather slender, narrower than the head, much narrowed behind, with a deep sinuate impression in front of the base. Elytra short and broad, the shoulders elevated, the depression within these latter short, the sutural stria scarcely foveolate at the base.

Two examples.

4. **Trimiopsis femoralis.**

Rufo-castanea, subtiliter pubescens; antennis articulo decimo magno, inæquali, undecimo acuminato; capite subquadrato, vertice convexo, fronte profundius irregulariter depresso.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Head scarcely broader than the thorax, the vertex very convex; the clypeal margin strongly raised and connected on either side by a small process to the anterior acuminate part of the convex vertex, so that the depressed space is rather less indistinctly divided into a lateral portion on each side and a median portion placed more anteriorly. This insect is closely allied to *T. clavicornis*, but differs somewhat in the structure of the head; and the tenth joint of the antennæ seems to be more unequal, that is, it has one of its sides more conspicuously longer than the other; the terminal joint is similar in the two species. The head of *T. femoralis* is not quite so broad as in *T. clavicornis*, and the middle femur is evidently inflated. This latter character may probably be peculiar to the male.

Unique.

DALMODES.

Dalmodes, Reitter, Verh. Ver. Brünn, xx. p. 197 (1882).

This genus has been recently established for two species, one Brazilian, the other Mexican. It closely resembles *Batrisus*, and I think its place will probably prove to be nearer to that genus than to *Euplectus*.

1. **Dalmodes brevicollis.** (Tab. I. fig. 21.)

Rufus, fulvo-pubescens, sat convexus; capite transverso ex parte majore depresso; prothorace transverso, ante basin transversim sulcato; elytris stria suturali impressis.
Long. $1\frac{2}{3}$ millim.

Hab. GUATEMALA, Coatepeque 1300 feet (*Champion*).

Antennæ short, the second joint not very large, joints 3–8 small, almost similar to one another, the ninth joint broader, transverse, the tenth a good deal broader, strongly transverse, the terminal joint large, acuminate. Head short and broad, with quite small eyes, the clypeal margin and the vertex elevated, the greater part of the surface depressed. Thorax very short, strongly narrowed behind, with a deep transverse sulcus extending across it near the base. Elytra without basal impressions or discoidal stria. Hind body almost unmargined. In the male the head is rather broader and the frontal depression more distinctly punctate than in the female; the hind tibiæ strongly dentate internally above the middle and much curved below the tooth. The hind body terminates in a small conical prominence which is minute in the male, but a good deal larger in the female. Two examples, one of each sex.

2. **Dalmodes rybaxides.**

Dalmodes rybaxides, Reitt. Verh. Ver. Brünn, 1882, p. 383 [1]; Deutsche ent. Zeit. 1885, p. 337, t. 3. f. 29 [2].

Hab. MEXICO (*Bilimek* [1 2]).

The figure indicates an insect similar to the female of *D. brevicollis*, but apparently with differently shaped head and hind body.

Group **TRICHONYCINA.**

TRICHONYX.

Trichonyx, Chaudoir, Bull. Mosc. iii. p. 164 (1845).

This is a genus of about twenty species, but it is doubtful whether it is correctly enumerated amongst those of our region. Indeed the only evidence I have of its existence in Tropical America is the fact that Schaufuss has ascribed four species to that province.

1. **Trichonyx (?) venustulus.**

Trichonyx venustulus, Schauf. Nunq. Otios. ii. p. 288 [1].

Hab. MEXICO, Teapa [1] (*coll. Reiche*).

This is possibly an insect near *Eurhexius*, but I do not think it will prove to belong to any genus I am acquainted with. The elytra are said to be "estriate."

RHEXIUS.

Rhexius, Leconte, Bost. Journ. Nat. Hist. vi. p. 102 (1848).

This very distinct genus is apparently peculiar to the warmer regions of the New World. The structure of the prothorax is most remarkable, its anterior part being

constricted so as to form a short tube in which the head is inserted by a very short neck; this thoracic tube has the appearance of being only a development, rather greater than usual, of the neck of the head, but it is not so.

1. **Rhexius optatus.** (Tab. I. fig. 23.)

Testaceo-castaneus, subtiliter pubescens; capite fortiter impresso, vertice emarginato; prothorace anterius abruptissime constricto, parte anteriore sat elongato; abdomine parum elongato.

Long. vix $1\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ strongly elbowed; the ninth joint rather large, not strongly transverse. Head very short, the vertex conspicuously concave-curvate behind. Thorax with the anterior constriction very abrupt and rather elongate, so as to be as long as broad.

This is extremely closely allied to the typical species, *R. insculptus*, Lec., from Louisiana, so that at first I thought they were identical. *R. optatus* is, however, a little smaller, has the ninth joint of the antennæ larger, the head shorter, the peculiar peduncle of the front of the thorax longer, and the hind body less elongate. Only one example was obtained.

EURHEXIUS.

Corpus subdepressum. Antennæ rectæ; ad basin distantes, clava tri-articulata. Caput breve transversum, collo abrupto, subtus pubescens. Palpi maxillares parvi, articulo ultimo ovali. Coxæ anteriores elongatæ, prominulæ, lineares. Coxæ posteriores contiguæ. Tarsi breviusculi, unguiculis duobus inæqualibus præditi. Abdomen marginatum.

This genus differs from *Rhexius*, to which it is closely allied, by the ungeniculate antennæ, and the comparatively normal condition of the prothorax; this latter, though with the anterior part more or less narrowed and prolonged according to the species, never exhibiting the peculiar structure seen in *Rhexius*. The basal joint of the antennæ varies in length according to the species, but though it is sometimes unusually long the antennæ are not geniculate. *Eurhexius* is probably peculiar to Tropical America, and no doubt *Rhexius simonis* and *R. procerus*, Reitter, belong to it.

1. **Eurhexius vestitus.** (Tab. I. fig. 22.)

Rufo-brunneus, densius pubescens, haud nitidus; capite brevi, anterius curvatim depresso, vertice longitudinaliter impresso; prothorace minus elongato, canaliculato, ante basin sulcato; elytris humeris subelevatis, basi sex-foveolata.

Long. $2\frac{1}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ rather stout; the basal joint moderately long, but not reaching so far outwards as the convexity of the eye; the second joint rather small; joints 3–8 still smaller, similar to one another, the ninth and tenth larger, transversely subquadrate; the terminal joint as long as the preceding two together, very pubescent. Head very broad,

with the clypeal margin raised, and the surface behind it depressed, the convex vertex rather deeply divided in the middle by a depression. Thorax not so long as broad, canaliculate along the middle, and with a transverse groove in front of the base, an angular depression existing just behind the spot where the two channels intersect one another. Elytra with a well-marked sutural stria, this latter foveolate at the base, a depression (deep at the base) within the shoulders, and a third fovea between these two. First dorsal segment only slightly longer than the second. The unique example is no doubt a male, the penultimate ventral ring being extremely abbreviate in the middle, and the large terminal segment foveolate behind.

2. **Eurhexius parviceps.**

Rufus, sat pubescens, abdomine nigricante; capite perbreve, quam prothorax angustiore, utrinque foveolato, anterius minus discrete impresso, vertice summo posterius impresso; prothorace sat elongato, canaliculato, ante basin transversim impresso, sub-bigibboso; elytris basi sex-foveolata.

Long. $2\frac{1}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

First joint of the antennæ not twice as long as the second; joints 3–8 small, similar except that the last two of them are just perceptibly broader and shorter, the ninth much larger, transverse, the tenth still larger, but also transverse, the terminal joint about as long as the preceding two together. Head unusually small, but with the eyes comparatively large; with a rather indefinite impression on the middle in front, and a fovea on each side only slightly separated from the frontal depression, the convex vertex foveolate behind. Thorax nearly as long as broad, much narrowed in front as well as behind, so that the front margin is not quite so broad as the basal margin; with a fine channel along the middle, not reaching quite to the front margin, and a transverse depression in front of the base, the depression foveolate at each end and in the middle so as to give rise to the appearance of two elevations behind it. Elytra with a broad depression within the shoulder, the sutural stria foveolate in front, and another fovea near it at the base. First ventral segment not longer than the next. The unique individual is of doubtful sex; it is probably a male, though it has no conspicuous mark except the great abbreviation of the penultimate ventral ring in the middle.

3. **Eurhexius ventralis.**

Rufescens, minus subtiliter pubescens; capite perbreve, lato, anterius curvatim impresso, vertice summo posterius foveolato; prothorace sat elongato, profunde canaliculato, ante basin transversim sulcato; elytris basi sex-foveolata; abdomine segmento primo dorsali quam secundum duplo longiore.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ with the basal joint about twice as long as the second; joints 3–8 small, almost similar to one another, the ninth and tenth broader, scarcely transverse, the

terminal joint scarcely so long as the preceding two together; the club very loosely articulated. Head broad and remarkably short, so as to be very strongly transverse; the clypeal margin elevated, a linear curved impression behind it; the vertex behind distinctly impressed in the middle. Thorax much constricted at the side behind the middle, with a very deep median channel, and a transverse sulcus before the base connecting three impressions. Elytra with the sutural stria foveolate at the base, a second fovea near this, and external to this latter a broader depression.

This insect also is unique; the individual being probably a male, as the apex of the hind body is curvate and the extremity concave. The elongate first dorsal plate of the hind body renders the species very distinct.

4. **Eurhexius trimiodes.**

Minor, angustulus, subtiliter pubescens, nitidus; antennis tenuibus, clava tri-articulata; capite minore, anterius impresso, utrinque foveolato; prothorace elongato, canaliculato, ante basin transversim sulcato; elytris basi sex-foveolata.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 (*Champion*).

This is very distinct from the other species on account of its narrower form and slender antennæ; these latter have the basal joint not elongate, but little longer than the second, the second joint bead-like and considerably larger than the following one, the joints 3–8 small, similar to one another, the ninth and tenth markedly larger, transverse, the terminal joint rather elongate. The head is short, but almost triangular in form, the vertex impressed in the middle behind. The thorax is elongate, much narrowed behind, the greatest width rather in front of the middle. The elytra have three impressions on each at the base, the median impression extending backwards as a short fold. The first dorsal segment of the hind body is scarcely longer than the second.

Only two examples were met with; they are no doubt male and female, the penultimate ventral ring being much abbreviated in the middle in the specimen I take to be the former sex.

JUBUS.

Jubus, Schaufuss, Nunq. Otios. ii. p. 454 (1876); Reitter, Verh. Ver. Brünn, xx. pp. 199 & 211 (1882).

Schaufuss includes in this genus three species from Colombia, in addition to the one from Mexico which is apparently the type. This author assigns two unequal claws to *Jubus*, but Reitter surmises it may prove to have two equal claws; I follow the latter in the position I give the genus.

1. **Jubus denticollis.**

Jubus denticollis, Schauf. Nunq. Otios. ii. p. 454[1].

Hab. MEXICO[1].

Group **FARONINA.**

DUCIOLA.

Duciola, Reitter, Verh. Ver. Brünn, xx. p. 199 (1882).

This genus has not been formally enunciated, but the more important points of its structure may be gathered from Reitter's table: a single Venezuelan insect was included in it.

Judging from recent remarks of Raffray and Reitter (Wien. ent. Zeit. iii. p. 32) it appears probable that the name *Jubus*, Schauf., may have to be used for this genus; but the evidence in favour of the name given by Herr Schaufuss does not appear quite satisfactory at present.

1. **Duciola scydmænilla.** (Tab. I. fig. 24.)

Rufescens, sat pubescens, anterius attenuata; antennis pedibusque testaceis, illarum clava laxa, elongata, manifeste quadri-articulata; capite anterius bi-impresso; prothorace lateribus ante basin constrictis, dorso pone medium profunde transversim sulcato.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Antennæ with small basal joint, the second joint equal to the basal one; joints 3–7 quite small, 8–10 larger, similar, transverse, the terminal joint longer, but not broader than the tenth. Head attenuate in front, with two deep parallel depressions. Thorax short, broader from the front to behind the middle, where it is so suddenly constricted as to leave a prominent angle; with a deep transverse sulcus in front of the base extending across the entire width. Elytra very elongate; with a sutural stria foveolate at the base, and with another fovea between it and the shoulder, these foveæ connected at the extreme base by a sort of flattened margin. Hind body short. Metasternum rather elongate. The unique individual is in a bad state of preservation; it may be a female, though the penultimate ventral ring is excessively abbreviate.

2. **Duciola aberrans.**

Flavescens, pubescens, anterius attenuata; antennis brevibus, extrorsum crassioribus; capite anterius bi-impresso; prothorace lateribus ante basin constrictis, dorso ante basin transversim sulcato; elytris haud elongatis, basi marginata; abdomine segmento basali quam secundum duplo longiore.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

This species is exceedingly similar to *D. scydmænilla*, though differing in very important characters—the elytra being comparatively short; the metasternum so short that the middle coxæ almost touch the hind coxæ; the first dorsal segment much longer; and antennæ differently formed, being gradually thicker from the seventh joint to the apex. Only one example was met with; its flavescent colour is probably due to immaturity.

3. **Duciola punctata.**

Rufo-ferruginea, antennis, palpis pedibusque testaceis, pubescens ; elytris crebre evidenter punctatis.
Long. $2\frac{1}{3}$ millim.

Hab. Mexico, Acapulco (*Höge*).

Antennæ slender, with joints 8–10 subequal, each considerably longer than broad, the eighth twice as long as the seventh, the terminal joint conspicuously longer than the tenth, acuminate. Head elongate, deeply longitudinally bi-impressed; eyes not prominent. Thorax nearly as long as broad, with two very minute tubercles in the middle on the front margin of the very deep transverse channel. Elytra rather longer than the thorax, somewhat closely and distinctly punctured, pubescent. Basal dorsal segment of the hind body much longer than the second.

This insect also is unique, and I do not know the sex of the example ; it has a large impression on the apical ventral plate. *D. punctata* is readily distinguished from *D. scydmænilla* by the punctate wing-cases, and from *D. aberrans* by the structure of the antennæ.

ENDYTOCERA.

Antennæ undecim-articulatæ, pubescentes, articulis inter se parum discretis; clava maxime elongata, ex articulis sex vel septem composita. Coxæ anteriores valde elongatæ, parallelæ. Corpus dense pubescens.

This genus should be placed near *Duciola*, Reitter, from which it differs remarkably in the structure of its antennæ. These organs are of a peculiar nature: the joints fit closely to one another, and are covered with a dense pubescence so that the articulations, especially those of the extremely elongate club, are difficult to count and distinguish ; the first joint is rather large, and pubescent like the head, then follow three comparatively small joints, and then apparently six stouter elongate joints complete the organ ; the first of the outer six joints has, however, at its base a small joint which can only be detected by greatly bending the antenna, and thus there are really eleven joints. The palpi are small, the terminal joint slender, fusiform. The head is without depressions ; the points of insertion of the antennæ are without tubercles, though placed on the front of a short prolongation so as to be extremely exposed ; the under surface is densely pubescent, the pubescence divided by a glabrous suture furcate in front, the sides not at all distinct. The prosternum is rather large, densely pubescent ; the front coxæ are very long, parallel ; the middle coxæ rather prominent ; the hind coxæ contiguous ; the metasternum rather long. The ventral rings are apparently only five in number, the basal ring being concealed by the coxa ; on the dorsal surface five rings are visible, and the sides are strongly margined. The epipleuræ are marked off by a very sharp ridge. There are two quite small, very nearly equal, claws on the tarsi.

These characters are taken from *E. vestita* ; the second species, *E. cognata*, appears to be really congeneric, though it exhibits a slight difference in the structure of the front of the head.

1. **Endytocera vestita.** (Tab. I. fig. 25.)

Brunnea, elytris rufescentibus, omnino densissime flavo-pubescens; prothorace lateribus pone medium subito constrictis, prominulis, dorso pone medium depressione magna glabra.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ rather long, densely pubescent, the apex not thicker than the middle. Head elongate, a little constricted in front of the eyes, evenly convex, without depressions, exceedingly densely pubescent. Thorax transverse, the sides abruptly constricted so as to leave a prominent angle a little behind the middle; the surface very densely punctate and pubescent, except on a large transverse depression behind the middle; on each side, scarcely connected with the median depression, is a smaller depression. The elytra are large, with a deep sutural stria, and obscure traces at the base of the false basal margin seen in many Pselaphidæ. The legs are slender, the hind tarsi elongate and slender. One example.

2. **Endytocera cognata.**

Piceo-brunnea, elytris piceo-rufis, densissime subtiliter pubescens, subopaca; prothorace brevi, lateribus pone medium constrictis, minus acute angulatis, ante basin transversim depresso.
Long. $3\frac{1}{4}$ millim.

Hab. Panama, Bugaba 800 to 1500 feet (*Champion*).

Head with an obscure depression on either side much concealed by pubescence; vertex foveolate. Thorax strongly transverse, very finely and minutely punctate, shining though closely and finely pubescent; with a curved transverse impression in front of the base, and near it on either side a very large foveiform depression. Elytra elongate, with a sutural stria, and between it and the shoulder a very fine but elongate plica. First dorsal segment not at all longer than the second.

This insect also is unique; though similar at first sight to *E. vestita* it is abundantly distinct. The individual is probably a female.

Fam. SCYDMÆNIDÆ*.

We have received only very few individuals of this family from Mexico, our material in fact being almost exclusively the results of Mr. Champion's collecting in Guatemala and the State of Panama. As no Scydmænidæ have hitherto been described from any part of our region, except Mexico, it is not a matter of surprise that so large a proportion of our acquisitions in this family are new. As the genera are so few in number, it is unnecessary for the purposes of this work to make use of any subdivision of the family.

* By D. Sharp.

EUCONNUS.

Euconnus, Thomson, Skand. Col. iv. p. 88 (1862); Reitter, Ins. Deutsch. iii. pt. 2, p. 178.
Scydmænus, Gemminger & Harold, Cat. Col. ii. p. 706 (pars).

Although *Euconnus* is not recognized by the authors of the Munich Catalogue as distinct from *Scydmænus*, it appears nevertheless to be a valid genus, distinguished by the head being more or less narrowed behind, with the eyes placed near the front, and the anterior part abruptly deflexed at a right angle with the vertex, and the antennæ inserted immediately behind the labrum. The genus is very rich in species, and is almost cosmopolitan. As our representatives are numerous, and do not fall satisfactorily under the subgenera formed for the European species, I have, to facilitate reference, adopted a division that unfortunately is not a good one, as there are a few intermediate or doubtful forms; but I have not been able to make a more useful one.

§ 1. *Thorax at the base either bifoveolate or transversely impressed.*

This group comprises a considerable variety of forms: where the thorax is bifoveolate the two foveæ are usually connected by a nearly obsolete channel; sometimes this channel is more developed, and the foveæ are merely deeper impressions at its extremity; this transverse channel also is frequently more obsolete in the middle, and may become almost completely divided into two transverse depressions as in *E. difficilis*.

A. *Thorax without lateral carinule at the base.*

In many species of this group the sides of the thorax are more sharply deflexed at the base, giving rise to a faint appearance of a carinule, but there is really no raised line on the angle.

1. **Euconnus bifoveolatus.**

Scydmænus bifoveolatus, Schauf. Mon. (in Nov. Act. Leop.-Carol. Nat. Curios. xxxiii.) p. 65 (1866)[1].

Hab. Mexico, Teapa [1].

2. **Euconnus chevrolati.**

Scydmænus chevrolati, Schauf. Mon. p. 69, t. 2. f. 8[1].

Hab. Mexico, Yucatan [1].

Some doubt must be expressed as to whether the insects supposed to be the sexes of *E. chevrolati* are really one and the same species.

3. **Euconnus trigeminus.**

Scydmænus trigeminus, Schauf. Mon. p. 37, t. 1. ff. 1, *a*, *b* [1].

Hab. Mexico, Teapa [1].

Possibly allied to *E. hirsutus* and *E. alticola*.

4. **Euconnus gravidus.** (Tab. II. fig. 1.)

Rufus, capite, prothorace antennisque nigricantibus, pube elongata erecta laxe vestitus; antennis elongatis, hirsutis, apicem versus crassis, haud abrupte clavatis; prothorace subconico, basi utrinque foveolato; elytrorum humeris elevatis.
Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui, Caldera in Chiriqui (*Champion*).

Antennæ thickly covered with hair, nearly black, the basal portion usually very dark infuscate-red, and the apical joint sordid red; the seventh joint rather larger than the sixth, as long as broad, the three following joints transverse; the terminal joint still stouter, elongate, acuminate, in the male bearing at the base on one side a large fovea. Head elongate, much narrowed behind, the vertex very densely pubescent, the pubescence dark in colour. Thorax elongate, longer than broad, broader from the front to behind the middle, bearing much erect pubescence, with a round fovea on each side near the base. Elytra with fine, elongate, erect, scanty pubescence.

We have received over twenty examples of this species. The fovea of the male antenna seems to vary somewhat in size and form, and is occasionally accompanied by a plication or elevation of the surface beyond it. The specimens are much decayed, and possibly the head, thorax, and antennæ may be naturally of a lighter tint, as in some examples the thorax agrees in colour with the elytra.

5. **Euconnus torquatus.**

Rufus, capite, prothorace antennisque nigricantibus, his articulo ultimo rufescente, pube elongata erecta laxe vestitus; antennis crassiusculis, hirsutis, apicem versus paullo crassioribus, haud discrete clavatis; prothorace sat elongato, lateribus rotundatis.
Long. $2\frac{1}{4}$–$2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador, Las Mercedes, San Isidro, Zapote, Panima (*Champion*).

This species is very closely allied to *E. gravidus*, but is slightly smaller, and has the antennæ less elongate and less thickened externally; and the sides of the thorax appear to be more rounded, so that the shape of this part is less conical. I conclude I have both sexes before me; if so, the male has longer antennæ and a more conical thorax than the female, and is consequently very similar to the female of *E. gravidus*; the female of *E. torquatus* is, however, readily distinguished from that species. These insects may possibly be distinct species and not the sexes, and my description is drawn from the form having the shorter antennæ. Ten examples.

6. **Euconnus subclavatus.** (Tab. II. fig. 2.)

Rufus, capite prothoraceque piceis, pube erecta laxe vestitus; antennis sat elongatis, crassiusculis, clava vix discreta quadri-articulata; prothorace haud magno, suboblongo.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, La Tinta, Senahu (*Champion*).

Antennæ dark red, moderately pubescent; the four terminal joints all of about one width, only slightly broader than the others, and very loosely articulated, so that they scarcely form a club; joints 8–10 subquadrate, the terminal joint considerably longer than broad. Head with the sides and vertex very densely pubescent. Thorax, especially at the sides, densely pubescent, and between oblong and conical in form. Elytra short, impressed at the base, with elevated shoulders, and bearing a fine, moderately long, not dense, pubescence. Only three examples have been received; but I presume I have both sexes before me, as one of the two individuals from La Tinta is probably the male, it having the four terminal joints of the antennæ a little longer than the others.

Closely allied to *E. gravidus* and *E. torquatus*, but readily distinguished by the structure and pubescence of the antennæ.

7. **Euconnus segnis.**

Rufo-brunneus, capite prothoraceque magis obscuris, pube suberecta minus tenuiter vestitus; antennis pedibusque brevibus, illis crassis, articulis 8°–10^{m} fortiter transversis; prothorace minus gracili.

Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui between 2500 and 4000 feet, David (*Champion*).

Antennæ piceous; joints 3–6 subequal, nearly quadrate, joint 7 broader, transverse, joints 8–10 again broader, strongly transverse, the terminal joint short, but little longer than broad. Head rather small, very densely pubescent, the neck deeply constricted, the vertex much prolonged over the front of the thorax. Thorax also densely pubescent, and owing to this and the concealment of its anterior margin its exact shape is not easily seen; it is apparently not longer than broad, and has a subobsolete transverse impression in front of the base, the impression indefinite in the middle (varying according to the point from which it is viewed), and deeper on each side externally so as to form a slight lateral fovea. Elytra with only a very short humeral elevation; rather closely pubescent. Legs short. Three examples.

8. **Euconnus auritus.**

Rufo-brunneus, capite prothoraceque piceis, pube suberecta sat dense vestitus; antennis pedibusque parum elongatis, illis vix clavatis, crassiusculis; prothorace conico-oblongo, basi evidenter bifoveolato.

Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ stout, rather short, with an indistinct club, which is 5- rather than 4-jointed, joints 7–10 being subequal, each scarcely transverse, the terminal joint rather long, the sixth joint scarcely differing from the fifth. Head rather narrow, with much prolonged densely pubescent vertex. Thorax broader towards the base, longer than wide, very distinctly bifoveolate, densely pubescent at the sides. Humeral elevation of the elytra slight.

Closely allied to *E. segnis*, but rather larger, with longer thorax, antennæ, and legs. Only one mutilated example has been preserved.

9. **Euconnus difficilis.**

Rufo-castaneus, dense pubescens; antennis parum elongatis, clava laxe articulata; capite parvo; prothorace subconico, ante basin transversim impresso; elytrorum humeris minus breviter elevatis.
Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ with the basal portion rather slender, and with an ill-defined 5-jointed club, the seventh joint differing more from the sixth than it does from the eighth; joints 8–10 rather small, transverse; the terminal joint small, scarcely longer than broad. Head small and narrow, very densely pubescent, the vertex prolonged. Thorax densely pubescent, rather slender, deeply transversely impressed in front of the base, the impression slightly interrupted in the middle, and deeper at its external termination. Elytra depressed at the base so that the shoulders are rather strongly elevated; finely, rather closely, pubescent. Legs moderately short.

Unique. This species is readily distinguished from *E. segnis* by the more slender legs and antennæ and the deeper thoracic impression.

10. **Euconnus oscillans.** (Tab. II. fig. 3.)

Rufo-castaneus, capite prothoraceque piceis, pube suberecta subelongata vestitus; antennis parum elongatis, clava brevi, quadri-articulata; prothorace utrinque profunde foveolato; elytrorum humeris evidenter plicatis.
Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, San Isidro, Zapote (*Champion*).

Antennæ with joints 3–7 subequal, the seventh being scarcely different from the sixth; joints 8–10 rather short, transverse; the terminal joint rather short. Head much narrowed behind, rather densely pubescent, the vertex much elevated. Thorax longer than broad, not much narrowed in front, evidently foveate on either side in front of the base, the depression between the foveæ obsolete. Elytra moderately broad, with rather long, slender, humeral elevation, and scanty, rather long, pubescence. Legs slender, moderately short. One example only from each locality.

11. **Euconnus obesus.**

Robustus, brevior, latus, rufus, capite prothoraceque piceis, elytris pube elongata sparsa vestitis, capite prothoraceque densius pubescentibus; antennis haud abrupte clavatis, extrorsum crassioribus, articulis 8°–10^{m} transversis; prothorace oblongo-subquadrato, basi evidenter bifoveolato; elytrorum humeris longius plicato-elevatis.
Long. $1\frac{2}{3}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ moderately stout; joints 3–6 similar to one another, the seventh joint only

slightly larger, the four others forming an ill-defined club gradually increasing in breadth outwards, the terminal joint moderately long. Head rather broad, the sides scarcely narrowed behind, rather densely pubescent. Thorax longer than broad, not much narrowed in front. Shoulders of the elytra abruptly elevated so as to form an elongate plica. Legs short.

This species is closely allied to *E. oscillans*, but I think distinct; the elytra are broader, of a bright red colour, and with more scanty pubescence; the head is more quadrate in form; and the antennæ rather longer and less abruptly clavate. Unique.

12. **Euconnus indutus.** (Tab. II. fig. 4.)

Brunneus, pube elongata erecta omnino densissime vestitus; antennis crassis, vix clavatis; prothorace basi utrinque ad latus carinula elevata, medio longitudinaliter subconvexo, ante basin prope medium utrinque minute obsoleteque foveolato.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

A very distinct species, distinguished at first sight by the very dense pubescence, but possessing also numerous other peculiarities. Antennæ with joints 3–7 subequal, the eighth and ninth joints rather broader, subquadrate, the tenth joint a little broader, transverse, the terminal joint rather short, obtuse. Palpi elongate. Head very densely pubescent; eyes rather convex. Thorax uniformly covered with a very dense pubescence, obscurely longitudinally elevated along the middle; with a fine short carina on each side at the base, and between this and the middle only obscurely foveolate. Elytra densely pubescent, the pubescence more flavescent than that of the anterior parts, the shoulders elevated. Unique.

13. **Euconnus calvus.** (Tab. II. fig. 5.)

Rufus, nitidus, fere glaber; antennis gracilibus, clava elongata, gracili, laxe articulata; capite subtransverso; prothorace ad angulos posteriores utrinque foveola majore; elytris sanguineis, humeris elevatis.

Long. $1\frac{7}{8}$ millim.

Hab. GUATEMALA, San Isidro, Pantaleon (*Champion*); PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Antennæ rather slender, with distinct fine exserted pubescence; joints 3–6 subequal, the seventh joint longer but not broader; the joints 8–10 each longer than broad, the eighth longer than the tenth, the terminal joint about equal to the eighth. Head short, broad in front, abruptly narrowed behind. Thorax much narrowed in front, its greatest width in front of the middle, the sides nearly straight behind. Elytra convex, strongly curvate at the sides, the humeral elevation quite short; without punctuation or pubescence. Legs slender. Under surface finely pubescent.

Only one example was obtained in each locality; the specimen from the State of Panama is in a very bad state of preservation, and only doubtfully assigned to *E. calvus*.

14. **Euconnus solitarius.**

Rufus, nitidus, tantum in prothorace et in elytrorum basi setulis perpaucis munitus; antennis gracilibus, clava sat elongata, gracili, laxe articulata; prothorace ad angulos posteriores utrinque foveolato; elytris sanguineis, humeris breviter elevatis.
Long. 2 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Although very close to *E. calvus* I think this insect is probably distinct, the club of the antennæ being considerably shorter, so that the eighth joint is scarcely longer than the seventh, and the penultimate joint only about as long as broad, the terminal joint also being short. The thorax, moreover, is rather shorter and broader, and the basal foveæ not quite so large. Unique.

15. **Euconnus gracilicornis.** (Tab. II. fig. 6.)

Rufus, capite prothoraceque piceis, antennarum clava obscura, prothorace hirtello, capite elytrisque calvis pernitidis; prothorace oblongo; antennis gracilibus, clava tri-articulata.
Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, Los Remedios (*Champion*).

Antennæ unusually slender, rather long; eighth joint slender, but slightly broader than the seventh, elongate, much longer than broad; three terminal joints broader, but slender, forming a loosely articulated club. Head rather small, much narrowed behind. Thorax oblong, a little narrowed in front, with an irregular pubescence; the basal foveæ of moderate size. Elytra with small deep basal impressions, the shoulders not raised. Legs slender, the femora delicately clavate. Two examples.

Similar to *E. calvus*, but smaller, and very distinct by the structure of the antennæ.

16. **Euconnus mirandillæ.**

Rufescens, capite prothoraceque obscurioribus, pube subtili omnino sparsim vestitus; antennis vix elongatis, clava quadri-articulata; prothorace oblongo ad angulos posteriores utrinque foveola majore impresso; elytrorum humeris parum elevatis.
Long. $1\frac{5}{8}$ millim.

Hab. GUATEMALA, Mirandilla (*Champion*).

This species is closely allied to *E. guatemalenus*, but the antennæ are rather shorter, each of the joints 8–10 being scarcely so long as broad; the thorax is less elongate and slender, and possesses a rather large fovea on each side at the base, the fovea, however, rendered rather obscure by being placed quite at the outside.

Although so similar to *E. guatemalenus* I have placed this insect in a different group of the genus, as there is apparently no thoracic carinule.

17. **Euconnus giraffa.** (Tab. II. fig. 7.)

Castaneus, nitidus, minus dense pubescens; antennarum clava longissima, fere quinque-articulata; capite elongato, postice fortiter angustato.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ elongate; second joint very long, the third joint small, only about half the size of the fourth; joints 4–6 subequal; the seventh joint a little broader, much longer than wide; the eighth rather broader, but scarcely so long, its apical portion a little attenuate; the ninth similar in form but slightly broader; the tenth larger, longer, and broader; the terminal joint elongate, acuminate. Head very long, regularly narrowed behind, only very sparingly pubescent. Thorax more globose than usual in the genus, longer than broad; rather densely pubescent at the sides, bare on the disc, and with a fine transverse channel close to the base. Elytra convex, sparsely pubescent, almost destitute of intrahumeral depression. Pectoral lamina very long and slender.

This remarkable little insect is unique. Although the thoracic channel is placed very near the hind margin it undoubtedly exists.

18. **Euconnus excavatus.** (Tab. II. fig. 8.)

Rufus, capite prothoraceque rufo-obscuris, pube minus elongata suberecta sat dense vestitus; antennis crassiusculis, clava quinque-articulata, articulo ultimo brevi; prothorace ante basin utrinque foveolato, ad basin externe breviter plicato; elytrorum humeris brevissime elevatis.

Long. 2 millim.

Hab. NICARAGUA, Chinandega (*Sallé*).

This species is readily distinguished by the structure of the antennæ, and by the fact that each flank of the thorax is marked by a depression concealed from above by a small but sharp prominence. The sixth joint of the antennæ is a little larger than the fifth, and the seventh is about equal to the eighth, joints 8–10 being each transverse, and the terminal joint unusually short. The head is densely pubescent, with much elevated vertex. The thorax is subquadrate and is distinctly foveate on each side, and its peculiar construction is distinctly visible on each side at the base. The elytra are rather elongate and narrow, with rather short distinct pubescence.

Two examples. I do not think there is any thoracic carinule, although the side at the base is very sharply deflexed.

19. **Euconnus distans.**

Minimus, rufo-castaneus; antennis parvis, clava tri-articulata; prothorace conico-oblongo, basi transversim impresso.

Long. $1\frac{1}{10}$ millim.

Hab. GUATEMALA, Torola (*Champion*).

Antennæ with joints 3–7 minute and slender, the eighth joint a little broader, the ninth and tenth much broader, transverse, the terminal joint short. Head rather long and narrow, with but little pubescence. Thorax slender, hirsute; with a deep transverse impression in front of the base, the impression only slightly interrupted in the middle.

Elytra rather slender, sparingly pubescent, with a short but distinct humeral elevation. Front tibiæ rather strongly incurved at the apex.

This distinct little insect is unique.

20. **Euconnus mutandus.** (Tab. II. fig. 9.)

Gracilis, castaneus, elytris rufo-castaneis, pube sat elongata suberecta sat dense vestitus; antennis basi gracili, clava magna; capite angusto, elongato, oculis subprominulis; prothorace conico-oblongo, ante basin tenuiter transversim sulcato.

Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

Antennæ with the basal joint short, the second joint rather long, the third joint small, the fourth, fifth, and sixth joints each slightly longer; the seventh much longer, but scarcely broader; the eighth not longer than the seventh, but much broader, subquadrate; the ninth a little broader, evidently transverse; the tenth larger, subquadrate; the terminal joint short, a little longer than the tenth. Head slender, much narrowed behind, with elevated pubescent vertex; the eyes more convex and more convexly faceted than usual in this genus. Thorax rather long and slender, the transverse impression near the base delicate. Elytra with rather scanty pubescence, and a slight humeral plica. Legs slender.

B. *Thorax with a minute carinule at the base on each side.*

21. **Euconnus guatemalenus.** (Tab. II. fig. 10.)

Rufescens, capite prothoraceque picescentibus, pube elongata sparsim vestitus; antennis sat elongatis, clava laxissime articulata; capite subtransverso; prothorace suboblongo, basi utrinque tantum minute foveolato; elytrorum humeris parum elevatis.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, El Tumbador 2500 feet, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ red; joints 3–6 small, equal, the seventh joint distinctly longer but only very slightly broader; club not broader towards the extremity, very loosely articulated, the eighth joint rather longer than broad, the tenth hardly so long. Head short, rather abruptly narrowed behind, with only scanty pubescence. Thorax slender, oblong, only a little narrowed in front, bearing a scanty long pubescence, and with the basal fovea minute and close to the side. Elytra rather broad, much curvate at the sides; with moderately long, rather scanty, pubescence. Legs rather long and slender.

Four examples. The Panama exponent is very mutilated and decayed, and has entirely lost its antennæ, and may not be really conspecific.

22. **Euconnus championi.**

Castaneus, elytris dilutioribus, nitidus, fere glaber; antennis clava elongata, gracili, laxe articulata; prothorace suboblongo, basi utrinque evidenter foveolata; elytrorum humeris vix elevatis.
Long. $1\frac{5}{8}$ millim.

Hab. GUATEMALA, El Tumbador, Capetillo, Tamahu, San Juan in Vera Paz (*Champion*).

This species is closely allied to *E. calvus*, but is rather smaller and more delicate; the club of the antennæ is much less elongate, each of its four joints being shorter though the proportions are similar; there are some scanty hairs on the sides of the thorax; the thoracic foveæ are not so large, but are connected by a subobsolete channel; there are a very few hairs on the humeral portion of the elytra, and the shoulders are but little elevated owing to the basal depressions extending only a very short distance backwards.

E. championi is almost equally close to *E. guatemalenus*; but the latter has a more slender thorax with obsolete foveæ, and a distinct though scanty pubescence on the elytra.

23. **Euconnus subtilis.** (Tab. II. fig. 11.)

Rufus, capite, prothorace antennisque nigricantibus, perparum pubescens; antennis subgracilibus, clava quadri-articulata; prothorace oblongo, externe foveolato.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Dueñas, Capetillo (*Champion*).

Antennæ black; joints 3–6 but little different from one another, the seventh joint longer; joints 8–10 subequal, slender, longer than broad; the terminal joint not at all stouter, evidently longer than the tenth. Head rather broad and short, much narrowed behind, almost destitute of pubescence. Thorax slender, suboblong, being but little narrowed in front; with a moderately large fovea near the hind angle, and very little pubescence. Elytra rather slender, bright red, shining, without pubescence, the shoulders scarcely elevated. Legs slender, red.

Six examples. Although very similar to *E. calvus* and *E. solitarius*, a very minute thoracic carinule exists in this species.

24. **Euconnus frontalis.**

Subrobustus, rufus, capite prothoraceque piceis, parcissime pubescens, pernitidus; antennis sat elongatis, clava elongata et laxe articulata; prothorace robusto, utrinque foveola majore impresso; elytris intra humeros depressis.
Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ moderately long and stout, entirely red; joints 3–5 similar, the sixth joint a little longer, the seventh much longer; joints 8–11 forming an elongate loosely

articulated club, each of them longer than broad, the eighth and eleventh joints about equal in length, the other two a little shorter. Head very broad in front, short, abruptly narrowed behind. Thorax much narrowed in front, its greatest width in front of the middle, thence nearly straight, being only very slightly narrowed behind; the basal foveæ deep, and there is a third, though obsolete, depression between them. Elytra rather broad, with a distinct depression near the shoulders; glabrous, except for a few hairs on the humeral portion. Legs rather slender.

Closely allied to *E. calvus*, but readily distinguished by the broad thorax, as well as by the minute thoracic carinule. Unique.

25. **Euconnus chiriquensis.** (Tab. II. fig. 12.)

Brunneus, elytris rufo-brunneis, pube brevi depressa sat dense vestitus, minus nitidus; antennis clava magna, elongata; prothorace subconico, ante basin haud profunde transversim impresso, ad latera utrinque breviter subtiliter carinulato.

Long. $2\frac{1}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

Antennæ with joints 3–7 subequal, small; the eighth joint much larger, a good deal longer than broad; the ninth and tenth joints each a little shorter and each rather longer than broad; the terminal joint acuminate, slightly longer than the eighth. Head transverse, but subcircular, the erect pubescence of the vertex very slight; eyes rather large, but not convex. Thorax rather large, broader towards the base, its pubescence fine and depressed; with a transverse depression, deeper at its termination on each side, in front of the base, and external to this a very fine minute carina. Elytra depressed at the base, with the shoulders plicate, but the plica very short; their pubescence short and depressed. Pectoral lamina remarkably broad, sulcate; middle of the metasternum prominent but deplanate.

26. **Euconnus germanus.** (Tab. II. fig. 13.)

Brunneus, elytris rufo-brunneis, pube brevi depressa vestitus, elytris subopacis; antennis clava magna, elongata; prothorace subconico, ante basin transversim impresso; elytrorum humeris vix elevatis.

Long. 2 millim.

Hab. GUATEMALA, Dueñas, Capetillo (*Champion*).

Allied by the structure of the antennæ and the remarkably broad lamina between the middle coxæ to *E. chiriquensis*, but smaller and quite distinct by the extremely obsolete lateral carinulæ on the thorax. The head is not all transverse, the thoracic depression is scarcely deeper at the sides, and the shoulders of the elytra are almost without plication.

One example from each locality. The thoracic carinule is excessively minute, and can only be seen in a quite clean example.

27. **Euconnus terminatus.**

Scydmænus terminatus, Schauf. Mon. p. 56[1].

Hab. Mexico, Teapa[1].

§ 2. *Thorax at the base without impressions or channel.*

In this group the thorax is usually conical in form, but there are a few species in which it is almost oblong in shape, and in these a very careful examination will reveal a trace of an exceedingly small obsolete fovea on either side. These few species would perhaps find their true allies in group § 1.

28. **Euconnus incultus.** (Tab. II. fig. 14.)

Elongatus, angustulus, castaneus, pube elongata erecta sat dense vestitus; antennis elongatis, hirtellis, extrorsum crassioribus, haud clavatis, articulo ultimo majore; prothorace elongato, oblongo, ante basin obsolete transversim impresso.

Long. $2\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

Antennæ with the first joint elongate; joints 2 and 3 subequal; 4–7 slightly longer, subequal, each slightly broader than its predecessor; the eighth joint a little shorter and broader, scarcely longer than wide, the ninth quadrate, the tenth slightly shorter, feebly transverse; the terminal joint large, obtuse. Head short, the vertex simple and not elevated, and without dense pubescence. Thorax very elongate, only feebly narrowed in front, scarcely narrowed behind; the basal sulcus indistinct, but prolonged on to the flanks. Elytra elongate, with a dense, fine, long pubescence; shoulders feebly elevated. Legs elongate; tibiæ feebly bisinuate internally, the anterior pair with a slight mucro at the apex.

Unique. A very distinct and remarkable species. Although possessing a constriction of a very indistinct nature in front of the base of the thorax, *E. incultus* is better placed here than in group § 1.

29. **Euconnus pubifer.** (Tab. II. fig. 15.)

Elongatus, angustulus, convexus, rufo-brunneus, pube elongata subflavescente dense vestitus; antennis crassiusculis, clava quadri-articulata et minus gracili; prothorace oblongo; elytrorum humeris perparum elevatis.

Long. $2\frac{1}{3}$ millim.

Hab. Nicaragua, Granada (*Sallé*).

Antennæ rather stout; third joint small, scarcely half so large as the second; the fourth, fifth, and sixth joints similar, each a little larger than the third; the seventh joint slightly broader than the sixth, slightly transverse; the eighth considerably larger, transverse; the ninth and tenth similar, rather larger than the eighth, transverse quadrate; the terminal joint acuminate, rather long. Head rather long and narrow,

bearing much pubescence. Thorax oblong, evenly covered with pubescence. Elytra rather long and narrow, with dense erect pubescence.

30. **Euconnus hirculus.**

Angustulus, convexus, castaneus, elytris rufis, pube sat elongata dense vestitus; antennis crassiusculis, clava quadri-articulata et nec lata neque elongata; prothorace elongato, oblongo; elytrorum humeris brevissime prominulis.

Long. vix 2 millim.

Hab. GUATEMALA, El Reposo (*Champion*).

Antennæ rather stout; joints 3–7 similar to one another, except that the third is rather smaller, each scarcely so long as broad; 8–10 also similar to one another, rather strongly transverse; the terminal joint acuminate, quite as long as the preceding two together. Head densely pubescent. Thorax elongate, oblong, densely pubescent, with traces of an obsolete fovea on each side in front of the base. Elytra narrow, convex. Femora strongly clavate.

This species bears considerable resemblance to *E. medialis* and its allies; but the thorax in the latter is conic, and the femora are much less clavate. *E. hirculus* is very closely allied to *E. pubifer*, though considerably smaller and possessing shorter antennæ. Unique.

31. **Euconnus puncticollis.**

Picescens, antennis, pedibus elytrisque rufis; antennis brevibus, crassis; capite angusto, vertice densissime flavo-pubescente; prothorace suboblongo, punctulato; elytris subtilius punctulatis.

Long. 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ with joints 3–6 subequal, small; the seventh joint a little larger, bead-like; joints 8–10 similar to one another, rather strongly transverse; the terminal joint short, obtuse. Head long and narrow, its posterior part densely pubescent. Thorax somewhat sparingly but distinctly punctate, and with a very feeble appearance of carination on the disc; rather densely pubescent at the sides. Elytra with short, rather sharply defined, humeral elevation; sparingly punctulate; their pubescence erect, rather firmer than usual. Pectoral lamina only moderately elevated.

This distinct species is unique. It is more distinctly punctulate than any other of the known *Euconni* of our region.

32. **Euconnus vividus.** (Tab. II. fig. 16.)

Latior, rufus, capite prothoraceque piceo-rufis, nitidior, parum pubescens, in elytris fere glaber; capite lato, subtransverso; antennis modice elongatis, crassiusculis, clava elongata et laxissime articulata.

Long. $2\frac{1}{8}$–$2\frac{1}{4}$ millim.

Hab. GUATEMALA, Pantaleon 1700 feet, Mirandilla (*Champion*).

Antennæ dark red, moderately pubescent; third joint much shorter than the second,

slightly longer than the fourth; the seventh joint longer than those preceding it, longer than broad; the four terminal joints forming a very elongate, loosely articulated club, becoming a little broader outwardly; the eighth and ninth joints each about as long as broad; the terminal joint longer than broad. Head broad, very shining, with only a few long fine hairs. Thorax robust, widest slightly in front of the middle, almost even, with an obsolete transverse impression in front of the base; very shining, with only a few long delicate hairs. Elytra short and broad, bright red, with only a feeble elevation of the shoulders; and without pubescence, except that there are a few hairs on the humeral portion. Anterior tibiæ with the lower half flattened, and furnished on the inner face with a dense glandular pubescence.

The five examples obtained do not show any distinctions of sex.

33. **Euconnus galericulatus.**

Scydmænus galericulatus, Schauf. Mon. p. 51[1].

Hab. Mexico, Teapa [1].

34. **Euconnus armatipes.**

Elongatus, rufo-castaneus, pubescens; antennis elongatis, apicem versus crassioribus, vix clavatis; prothorace conico-elongato; tibiis anterioribus intus supra medium processu tenui, elongato, descendente, armatis.
Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, Paso Antonio (*Champion*).

Antennæ with the second joint nearly twice as long as the small third joint; joints 4–6 each a little longer than its predecessor; the seventh joint similar to the sixth, longer than broad, the eighth a little longer than the seventh, scarcely broader, the ninth and tenth each a little shorter, only slightly broader; the terminal joint rather long. Head densely pubescent. Thorax elongate, conic-oblong, rather densely pubescent, quite unimpressed. Elytra rather slender, the shoulders very slightly elevated, the pubescence moderately close. Front tibiæ armed inwardly with a peculiar slender twig-like process.

Only a single example of this distinct species was obtained.

35. **Euconnus medialis.** (Tab. II. fig. 17.)

Sat gracilis, castaneus, elytris rufo-castaneis; antennis parum elongatis, haud crassis, clava laxe articulata et haud lata; prothorace conico; elytrorum humeris perparum elevatis.
Long. 2 millim.

Hab. Guatemala, near the city, Capetillo, Tamahu (*Champion*).

Antennæ with the second joint elongate; the third and fourth joints quite small, similar, the fifth and sixth a little longer, equal, the seventh just perceptibly broader than the sixth, similar to it in length; joints 8–10 a little broader, subequal, feebly transverse; the terminal joint short. Head rather narrow, densely pubescent, with

much elevated vertex. Thorax rather long, becoming almost gradually broader from the front to the base, rather densely pubescent. Elytra rather long and narrow, forming with the thorax an almost continuous outline; the basal depression scarcely present, so that there is scarcely any humeral elevation; their pubescence rather long, fine, and moderately dense. Legs rather short. The pectoral lamina strongly elevated in front.

Five examples.

36. **Euconnus fustiger.** (Tab. II. fig. 18.)

Castaneus, dense pubescens; antennis parum elongatis, crassiusculis, clava magna, lata; prothorace conico; elytris ad basin utrinque brevissime depressis.

Long. vix 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ stout; joints 3–7 small, similar to one another; the four terminal joints forming a stout, elongate, loosely articulated club, scarcely broader towards the extremity; the terminal joint moderately long. Head rather short, very densely pubescent. Thorax small, conical, narrow in front, becoming regularly broader to the base, densely pubescent. Elytra short and broad; with a short fovea at the extreme base of each, causing the shoulder to appear slightly elevated.

Closely allied to *E. medialis*, but readily distinguished by the shorter and broader form and the stouter abruptly clavate antennæ. Unique.

37. **Euconnus hoplites.**

Latiusculus, piceo-castaneus, antennis pedibusque dilutioribus, dense pubescens; antennis crassiusculis, clava quadri-articulata, abrupta; prothorace conico; pectore processu elongato armato.

Long. vix 2 millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ with the second joint as long as the third and fourth joints together; the fifth and sixth joints only slightly longer than the third and fourth, the seventh evidently longer but not broader; joints 8–10 longer and broader, subequal, each quite as long as broad; the terminal joint a little longer than the tenth. Head very densely pubescent. Thorax regularly conic, rather longer than broad at the base, the latter transversely convex and quite unimpressed; densely pubescent. Elytra with a moderately close, rather long, pubescence; almost unimpressed at the base, so that the shoulders are only very slightly prominent. Breast armed in the middle with a rather long prominence, the front margin of which is directed obliquely backwards, the hind margin being perpendicular, though slightly curvate.

Unique.

38. **Euconnus obtusus.**

Castaneus, elytris rufo-castaneis, dense pubescens; antennis clavatis, clava quadri-articulata; prothorace conico; elytrorum humeris minus breviter plicatis.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Antennæ with the second joint quite twice as long as the third; joints 3–6 minute, subequal, the seventh just perceptibly larger; 8–10 considerably broader, subtransverse; the terminal joint short, obtuse. Head rather broad and short, very densely pubescent. Thorax rather slender, elongate, conic, densely pubescent. Elytra rather broad, deplanate towards the base; the humeral elevation internally sharply defined, so as to have the appearance on that side of an elevated plica.

The individual described is no doubt a male: the hind tibiæ are remarkably slender, and a little thicker about the middle, so as to have a slightly sinuate appearance; and are armed at the apex with a very short process, which, not being longer than the width of the tibia, is difficult to perceive. Unique.

39. **Euconnus celatus.**

Rufo-castaneus, evidenter pubescens, nitidus; antennis clavatis, clava quadri-articulata; prothorace conico-elongato; elytrorum humeris brevissime plicatis.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Quezaltenango 7800 feet, Totonicapam 8500 to 10,500 feet, Cerro Zunil, Zapote, Capetillo, Dueñas (*Champion*).

Extremely closely allied to *E. obtusus*, but rather smaller, and distinguishable by the less plicate shoulders; and by the fact that the hind tibia in the male is armed with a very slender elongate process or spine, which is about half the length of the tarsus. *E. celatus* is apparently a rather smaller and more slender insect, with slightly shorter antennæ, the proportions of the joints of these organs being, however, similar in the two species.

Apparently rare, single examples only having been met in each locality. The specimens show some variation in size and in the elongation of the antennæ, and it may prove that they consist of more than one species.

40. **Euconnus hirsutus.**

Scydmænus hirsutus, Schauf. Mon. p. 41[1].

Hab. MEXICO, Teapa [1], ?Cordova (*Sallé*).

I refer with much doubt to *E. hirsutus* a single mutilated example from Sallé's collection; this specimen is closely allied to *E. celatus*, but with the hind tibiæ armed only with a short, extremely delicate spine. Schaufuss describes a variety under the name of *bacchus*, which no doubt is a distinct species belonging to our group § 1.

41. **Euconnus mirandus.**

Castaneus, minus dense pubescens, nitidus; antennis clavatis, clava quadri-articulata; prothorace conico; elytrorum humeris brevissime plicatis.
Long. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 feet, Senahu (*Champion*).

In the male of this insect the hind tibia is armed at the apex with an elongate, slightly curved, spine, but little shorter than the tarsus. This character and the smaller size are almost all I can point out as of importance to distinguish the species from *E. celatus*.

42. **Euconnus alticola.**

Minor, angustulus, rufo-castaneus, sat dense pubescens; antennis extrorsum crassioribus, minus abrupte clavatis; prothorace ante basin obsoletius transversim impresso; elytrorum humeris breviter argute elevatis.
Long. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ with joints 3–6 very small, each scarcely so long as broad; the seventh joint broader, transverse, but small; joints 8–10 larger, subequal, rather strongly transverse; the terminal joint nearly as long as the preceding two together. Head not very densely pubescent. Thorax slender, moderately densely pubescent. Elytra with the humeral elevation short, but when viewed from the inner side sharply defined. Hind tibia armed at the extremity with a spine, this spine being rather elongate, but so slender that it looks like a seta.

Of this little insect, distinct by its antennal structure from *E. celatus*, only two examples were found. The transverse depression at the base of the thorax is so slight that it can only be seen by looking at the insect from behind in a certain light, and does not therefore necessitate my removing the species from amongst its allies to place it in group § 1.

43. **Euconnus gibbiodes.**

Castaneus, glaber; antennarum clava gracili, longissima.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ with the first joint very short, almost entirely concealed; the second joint only moderately long; joints 3–6 small, similar, the seventh longer than broad, slightly broader than, and twice as long as, the sixth; joints 8–10 similar to one another, elongate, only slightly broader than the seventh, but much longer, each much longer than broad; the terminal joint longer, slender. Head rather long and narrow, greatly narrowed behind. Thorax elongate, regularly conic. Elytra forming with the thorax one almost continuous outline, quite destitute of basal depression. Pectoral lamina large.

This remarkable and very distinct species is represented by a single example.

44. **Euconnus palpalis.**

Rufo-castaneus, dense pubescens; antennis gracilibus, tantum subclavatis; capite dense pubescens; prothorace conico-elongato; elytris humeris omnino brevissime elevatis.
Long. $2\frac{1}{4}$ millim.

Hab. Guatemala, Cubilguitz in Vera Paz (*Champion*).

Palpi elongate. Antennæ with the first joint exposed, the second joint elongate; joints 3–6 slender, gradually increasing in length, the third longer than broad, the sixth more than twice as long as broad; the seventh joint rather shorter than the sixth, and not perceptibly broader, the eighth to the tenth each becoming a little shorter, but only very slightly broader; the terminal joint about as long as the sixth. Head declivous in front. Thorax elongate, regularly conic, rather densely pubescent. Elytra with extremely short basal depression, so that the humeral elevation is correspondingly short. Front tibiæ with the pubescence on the inner face of their lower part remarkably developed.

This distinct species is unique. The pubescence on the inner face of the front tibiæ, conspicuous in many of our species of this group, here attains its maximum development.

45. **Euconnus simplicitus.**

Scydmænus simplicitus, Schauf. Mon. p. 57[1].

Hab. Mexico, Teapa[1].

SCYDMÆNUS.

Scydmænus, Latreille, Gen. Crust. et Ins. i. p. 281 (1802); Reitter, Ins. Deutsch. iii. pt. 2, p. 172.
Cyrtoscydmus (Motsch.), Reitter, Wien. ent. Zeit. iv. p. 58.

This name has until quite recently been used to include the majority of the species of the family; most of the extra-European forms are now recognized as belonging to *Euconnus*, and it is probable that *Scydmænus* will prove characteristic of the north temperate region. The Guatemalan species that I ascribe to it is somewhat aberrant, the pseudo-terminal joint of the maxillary palpus being more securiform than usual.

Reitter has lately proposed to sink the name *Scydmænus*, hitherto used by himself and all other entomologists, as a mere synonym of *Eumicrus*, and to adopt in its place the more recent (and unrecognized) *Cyrtoscydmus*; but as this course has no practical advantage, other than conformity with a theory as to the treatment of generic names that may or may not receive general assent, I am not yet inclined to follow him.

1. **Scydmænus brevipes.** (Tab. II. fig. 19.)

Subdepressus, hirsutus, pallide brunneus, antennis pedibusque testaceis; prothorace oblongo, postice in medio profunde bifoveolato.
Long. $1\frac{1}{3}$ millim.

Hab. Guatemala, El Tumbador 2500 feet, Cerro Zunil 4000 to 5000 feet, Capetillo, Dueñas (*Champion*).

Antennæ rather short and stout; the third and fourth joints minute, bead-like; the fifth and sixth slightly larger but otherwise similar; the seventh and eighth slightly broader, so as to be very feebly transverse; the ninth a little broader, not large, very evidently transverse; the tenth similar though slightly larger; the terminal joint short. Head small, truncate behind, rather feebly pubescent. Thorax longer than broad, the sides but little narrowed in front, so that it is almost oblong in shape; very hirsute, and with two deep closely approximate foveæ a little distance in front of the base. Elytra subdepressed, slender, rather densely pubescent, and with strongly elevated humeral prominences. Legs rather stout, the femora scarcely clavate, the tarsi very short.

Apparently rare, only seven examples having been procured.

2. **Scydmænus (?) plicatulus.**

Scydmænus plicatulus, Schauf. Mon. p. 42 [1].

Hab. Mexico, Teapa [1].—Colombia [1].

Possibly this species may not belong to our region at all, as the author cited appears to have entertained some doubts whether the Mexican example he had before him was conspecific with his Colombian type. In any case the genus is quite doubtful, as the structure of the maxillary palpus is said to be aberrant, approximating that of *Eumicrus*.

HOMOCONNUS.

Caput anterius subproductum sed haud deflexum; palpi maxillares articulo ultimo minuto acuminato; coxæ intermediæ maximæ, prominulæ, haud contiguæ, mesosterno inter eas subperpendiculare haud carinato; coxæ posteriores magnæ, globosæ, processibus posterioribus inter sese fere contiguis; metasternum elongatum, apice summo in medio profunde foveolato, inter coxas spinoso-producto; femora posteriora dente magno triangulari instructa.

This genus will comprise *Scydmænus dentipes*, *S. batesi*, *S. spinipes*, and *S. bonvouloiri*, of Schaufuss. The above-mentioned characters render it extremely distinct. The species as yet known are all from Tropical America and the Antilles, and the genus will probably prove to be peculiar to these regions.

1. **Homoconnus spinipes.** (Tab. II. fig. 20.)

Scydmænus spinipes, Schauf. Mon. p. 73, t. 2. ff. 12 *a*, *b* [1].

Hab. Mexico, Teapa [1]; Guatemala (*Sallé*), Teleman and San Juan in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).

Apparently rare, only six examples being extant.

EUMICRUS.

Eumicrus, Castelnau, Hist. Nat. Ins. Col. i. p. 209 (1840); Reitter, Ins. Deutsch. iii. pt. 2, p. 194.

Although treated until recently by most authors as a section of *Scydmænus*, this is

undoubtedly a valid genus, the peculiar structure of the maxillary palpus and of the trochanters being associated with a perpendicular, exposed, rather large pygidium. The genus is a very widely-distributed one, and is no doubt present in all the temperate and warm continental regions of the globe.

§ 1. *Thorax bifoveolate (or quadrifoveolate) at the base, the foveæ frequently minute.*

1. **Eumicrus brunneus.** (Tab. II. fig. 21.)

Scydmænus brunneus, Schaum, Analecta ent. p. 28 [1].
Eumicrus brunneus, Schauf. Mon. Scydm. in Nov. Act. Leop.-Carol. Nat. Curios. xxxiii. p. 89 [2].

Hab. MEXICO, Teapa [2], Yautepec (*Flohr*, *Höge*), near the city, Tehuantepec, Acapulco (*Höge*); GUATEMALA (*Sallé*), near the city, San Gerónimo, San Joaquin, Senahu, Cahabon, Chacoj (*Champion*); NICARAGUA (*Sallé*); PANAMA, Volcan de Chiriqui, David, San Miguel in the Pearl Islands (*Champion*).—SOUTH AMERICA, Colombia [1 2].

The male of this species has the front tarsi rather broadly dilated, but otherwise very closely resembles the female. *E. brunneus* was met with in abundance near the city of Guatemala and also in the Pearl Islands; the individuals from the latter locality are rather smaller and darker, but I can find no evidence of any distinction of a specific character. Schaufuss has pointed out [2] that Schaum was deceived [1] in supposing the thorax to have only a single fovea on each side.

Found on the sandy banks of small streams beneath decaying leaves, &c. (*Champion*).

2. **Eumicrus cognatus.**

Scydmænus cognatus, Schaum, Analecta ent. p. 29 [1].
Eumicrus cognatus, Schauf. Mon. Scydm. p. 88 [2].

Hab. NICARAGUA, Managua [2].—SOUTH AMERICA, Colombia [1 2].

Schaum having been mistaken in regarding the thorax of *E. brunneus* to be only bifoveolate, I fail to detect in the description any character by which the two could otherwise be distinguished, though Schaufuss retains them as distinct.

3. **Eumicrus vestalis.**

Eumicrus vestalis, Casey, Contr. Col. N. Amer. p. 85 [1].

Hab. NORTH AMERICA, Arizona [1].—MEXICO, Northern Sonora (*Morrison*), La Noria in Sinaloa (*Höge*).

This species is excessively near to *E. brunneus*, but is certainly distinct, as the front tarsi of the male are only feebly dilated; it is also rather more elongate in form. I can detect no sexual difference except that of the front feet.

4. **Eumicrus pectoralis.**

Brunneus, nitidus, longius sat crebre pubescens; capite posterius subtruncato; elytris sat elongatis.
Long. $2\frac{1}{4}$ millim.
Mas tarsis anterioribus leviter dilatatis; tibiis intermediis apice intus valde bimucronato; pectore in medio tuberculo magno, apice truncato et minute pubescente.
Fem. tarsis anterioribus fere simplicibus; tibiis intermediis apice intus minus valide mucronato; pectore mutico.

Hab. GUATEMALA (*Sallé*), near the city (*Champion*); NICARAGUA, Managua (*Sallé*).

This species has the antennæ formed similarly to those of *E. brunneus*; and, though readily distinguished from that species by the sexual characters, the two are in other respects extremely similar; *E. pectoralis* has, however, the hind body a little longer and narrower in proportion, approximating thus to *E. vestalis*, from which it is well distinguished by the sexual marks.

5. **Eumicrus laminatus.**

Elongatus, angustulus, brunneus, nitidus, pubescens; capite angustulo, collo minus abrupto.
Long. $2\frac{1}{8}$ millim.
Mas tarsis anterioribus leviter dilatatis; tibiis intermediis apice bimucronato; pectore in medio lamina longitudinali subhamata.

Hab. MEXICO, Cordova (*Sallé*).

I have before me only one example, in extremely bad condition, of this insect. Though certainly closely allied to *E. pectoralis*, the pectoral structure of the male decidedly indicates a different species, and it is probable that *E. laminatus* is a rather smaller and narrower insect; I detect no difference in the antennæ of the two.

6. **Eumicrus centralis.**

Brunneus, nitidus, longius sat crebre pubescens; antennis longioribus, clava elongata gracili.
Long. $2\frac{1}{8}$ millim.
Mas tarsis anterioribus fortiter dilatatis; pectore in medio leviter prominulo, densius minus subtiliter pubescente.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, San Gerónimo, Capetillo (*Champion*).

This species, at least in the male sex, is readily distinguished from *E. brunneus* by the pectoral structure and by the more elongate antennæ; these last-named organs having the fifth joint more elongate, and the seventh and eighth joints less reduced in size than they are in *E. brunneus*, the club also being longer and more slender. In other respects the two species are extremely similar. We have only received one example from each locality, and perhaps they may not all represent one and the same species, as they differ a little in the pectoral pubescence. The female I do not think we have received at all. It is possible that this sex may not have the more elongate antennæ of the male, and in that case is indistinguishable, in the present state of knowledge, from the corresponding sex of *E. brunneus*.

7. **Eumicrus sallæi.**

Major, robustus, convexus, brunneus, pubescentia parum elongata dense vestitus; antennis elongatis, articulo quinto valde elongato, clava elongata haud gracili; elytris convexis, rotundulis; tarsis majoribus.
Long. $2\frac{1}{3}$ millim.

Hab. Mexico, Cordova (*Sallé*).

This is very closely allied to *E. brunneus*, though a much larger insect; it is also much broader, and the pubescence of the elytra is denser and shorter. The head is broad, rounded behind. The antennæ are elongate and stout, the club being especially long, with elongate terminal joint, and its first joint a little longer than broad; the fifth joint is also very long, and the third joint a little longer than the second or fourth, these latter being about equal in length. The tarsi in either sex are considerably longer and broader than they are in *E. brunneus*. I have seen only three examples.

8. **Eumicrus bisphæricus.**

Eumicrus bisphæricus, Schauf. Mon. Scydm. p. 82 [1].

Hab. Mexico, Teapa [1].

This species is perhaps allied to *E. sallæi*; but, according to the description [1], is larger, viz. $2\frac{2}{3}$ lin. long, and has the fifth joint of the antenna dilated in front.

9. **Eumicrus commilitonis.** (Tab. II. fig. 22.)

? *Eumicrus commilitonis*, Schauf. Mon. Scydm. i. p. 84.

Breviusculus, convexus, rufo-brunneus, pubescentia parum elongata minus dense vestitus, nitidus; antennis abrupte clavatis, clava tri-articulata, articulo quinto parum, sexto haud, elongato; capite fere circulari; prothorace subgloboso, basi minus minute quadri-foveolata.
Long. $1\frac{1}{2}$–$1\frac{3}{4}$ millim.

Hab. Mexico, Teapa [1], Cordova (*Sallé*); Guatemala, Cubilguitz, Pantaleon (*Champion*); Nicaragua, Chontales (*Janson*), Granada (*Sallé*); Panama, David, San Miguel in the Pearl Islands (*Champion*).

Compared with the common *E. brunneus* this species is not only much smaller, but has a more robust thorax (broader near the front), with rather more conspicuous basal foveæ; the joints of the antennæ are all shorter, the club being more abruptly defined and with its first joint transverse; the pubescence is shorter and less erect; and the legs much shorter, the tarsi being quite short. The sexes are very difficult to distinguish, the front feet of the male being scarcely dilated.

E. commilitonis is apparently not common though widely distributed in our region, and apparently varies somewhat in accordance with its locality. Whether the species before me be really Schaufuss's *E. commilitonis* is open to doubt; the brief description, however, of that writer contains nothing that disagrees with our insect.

10. **Eumicrus** ——?

Hab. GUATEMALA (*Sallé*).

This insect is represented by a single female, which I fail to reduce to either *E. brunneus* or *E. commilitonis*, though in many respects it appears intermediate.

11. **Eumicrus brevipes.** (Tab. II. fig. 23.)

Latiusculus, rufo-brunneus, pube minus elongata dense vestitus; antennis articulo quinto mediocriter, sexto nullo modo, elongato, clava abrupta, sat elongata; prothorace minus gracili; elytris rotundulis.

Long. 2 millim.

Mas tarsis anterioribus fortiter dilatatis.

Hab. GUATEMALA, Las Mercedes, Capetillo (*Champion*).

This species is rather smaller than *E. brunneus*; and has short antennæ, the fifth joint being, however, very elongate, while the sixth is quite small and transverse, and scarcely larger than the very small seventh and eighth joints, the third and fourth joints are each smaller than the second, and the first joint of the club is slightly longer than broad.

Although we have received only a single male of *E. brevipes* it is evidently a distinct species from *E. brunneus* and *E. commilitonis*. The single female comes from Las Mercedes, and though it has the front tarsi a little dilated is, I feel sure, that sex of *E. brevipes*, and not the male of a different species.

§ 2. *Thorax completely destitute of basal foveæ.*

12. **Eumicrus concretus.** (Tab. II. fig. 24.)

Elongatus, angustulus, convexus, rufescens, antennis pedibusque testaceis, pube depressa sat elongata tenuiter vestitus; capite truncato, subtransverso; antennis gracilibus, clava elongata, tri-articulata, sat abrupta, articulo nono gracili, fere quadrato.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Reposo, Cerro Zunil, San Isidro, Pantaleon, Zapote, San Gerónimo, El Jicaro, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Antennæ rather slender and small, with elongate club; second joint twice as long as the third, fourth and fifth joints about equal, the latter a little the longer, though not so long as the second, the sixth small, the seventh and eighth very small, the ninth considerably smaller than the tenth, not transverse, the tenth also about as long as broad. Head rather short and broad, truncate behind. Thorax with its greatest width near the front, much narrowed behind. Elytra narrow, without any depression at the shoulders. I do not detect any sexual characters. This insect I expect will prove to be allied to *E. annulicornis*, Schauf.; but as that species is from the Amazon valley, and is described as having somewhat different pubescence, no doubt the two are distinct.

E. concretus is apparently rare, most of the localities cited having yielded only a single example.

13. **Eumicrus palmatus.**

Rufescens, convexus, pube suberecta sat dense vestitus; capite haud transverso; antennis clava fere bi-articulata, articulo nono sequente plus duplo majore, articulo quinto elongato.
Long. $1\frac{3}{4}$–$1\frac{7}{8}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ with the fifth joint elongate, nearly twice as long as the fourth, the seventh and eighth joints small, acuminate inwardly, the ninth transverse, not half so long as the tenth, the latter about as long as the acuminate eleventh joint. Head large, subquadrate, quite as long as broad. Thorax moderately narrowed behind. Elytra rather narrow, and without any humeral impression. Tarsi unusually elongate. The male has the metasternum depressed along the middle, and the base of the front tarsi strongly dilated.

Similar to *E. concretus*, but abundantly distinct by the structure of the antennæ, the larger head, and the male characters. One pair only was procured.

14. **Eumicrus subnudus.**

Piceus, nitidus, parce breviterque pubescens; antennis articulo quinto elongato, clava laxe tri-articulata; capite nullo modo transverso, lateribus postice angustatis, vertice truncato.
Long. $1\frac{3}{5}$ millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

Antennæ with the second and third joints subequal, the fourth joint slightly smaller, the fifth elongate, nearly twice as long as the sixth, the seventh and eighth joints minute, the ninth quadrate, the tenth rather larger, also quadrate, the terminal joint not elongate. Head considerably narrowed towards the vertex, the latter truncate. Thorax elongate, not much narrowed behind. Elytra rather broad, much broader from the shoulders towards the middle. Legs rather short and stout.

We have received only one mutilated example of this very distinct species; the posterior femora are remarkable on account of their very feeble clavation.

15. **Eumicrus speculator.**

Eumicrus speculator, Schauf. Mon. Scydm. p. 79 [1].

Hab. MEXICO, Teapa [1].

16. **Eumicrus mexicanus.**

Eumicrus mexicanus, Schauf. Mon. Scydm. p. 78 [1].

Hab. MEXICO, Teapa [1].

17. **Eumicrus minutissimus.**

Eumicrus minutissimus, Schauf. Mon. Scydm. p. 77, t. 3. f. 16[1].

Hab. ? Guatemala, Champerico (*Champion*).—Amazons[1].

We have received only one example of this minute creature from Guatemala, and though it does not differ from Schaufuss's description it is quite possible it may prove distinct.

HECOTUS.

Antennæ geniculatæ, articulo basali longissimo; palpi maxillares perelongati, quadri-articulati, articulo basali minutissimo, secundo valde elongato, anterius ante medium processum brevem emittente, articulo tertio gracili, elongato, apicem versus crassiore, quarto iterum elongato, præcedenti æquali.

The very curious insects for which this generic name is proposed are extremely distinct from all previously described forms, and can only be compared with the Oriental genus *Clidicus*, from which they differ by the very peculiar structure of the maxillary palpi, the two genera being, however, nearly allied. As the characters of *Clidicus* have never been fully investigated, it will be desirable to give in detail those of its ally in our region. The head is subtransverse, constricted behind so as to form an abrupt comparatively narrow neck; the eyes are small and placed near the anterior part. The antennæ are widely separated, inserted on the front of the head close to the eyes, and not clavate; they have eleven joints, and are strongly geniculate, the geniculation permitting the joints beyond it to be turned outwards and backwards, the basal joint being very elongate. The labrum is broad and short, emarginate, with prominent lateral angles, and bidentate in the middle. The mandibles are short, with slender curvate extremity and a long sharp tooth before this. The upper lobe of the maxilla is rather large, oblong, but rather broader at the extremity, the latter bearing long dense pubescence. The first joint of the maxillary palpus is small, and closely connected with its support; the second joint is extremely elongate, its basal portion curvate, and beyond the curve there projects forwards a rather long process slightly furcate at its extremity, the latter bearing two long setæ; the third joint is slender and elongate; the fourth joint also slender and long. The labium is exposed; the ligula becoming broader towards the extremity and here emarginate; the labial palpi are very small, widely separated, the first and second joints short and stout, the terminal joint excessively minute, subulate. The prosternum is large; the front coxæ cylindric, exserted, perpendicular, rather long, contiguous, the prosternal epimera not at all prolonged behind them. The middle coxæ are subglobular, moderately large, with an external prolongation exposing the trochantin; they are nearly contiguous, and the mesosternum in front of them bears a moderately elevated carina. The metasternum is moderately long. The hind coxæ are globular, rather widely separated, the space separating them being rather wider than the interval between each coxa and the edge

of the elytra. The ventral segments are five in number, the second, third, and fourth subequal, the first longer, the terminal much longer. There are no epipleuræ. The femora are strongly clavate; the tibiæ are without spurs; the tarsi are 5-jointed, slender, the basal joint of the posterior pair rather longer than the second and scarcely longer than the terminal joint.

1. **Hecotus agilis.** (Tab. II. fig. 25.)

Fulvo-rufus, pubescens; capite transverso; antennis palpisque maxillaribus geniculatis; elytris ad basin seriatim punctatis.
Long. 3–3½ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui below 6000 feet (*Champion*).

Antennæ with each joint longer than broad. Head canaliculate in the middle behind, the temples hirsute. Thorax elongate, its greatest width in front of the middle, considerably narrowed behind, transversely canaliculate at the hind margin, hirsute at the sides. Elytra elongate, not much curved at the sides, densely pubescent, with short series of punctures at the base which speedily become evanescent, the shoulders much raised. Legs elongate; front tibiæ strongly curvate; front coxæ very mobile, their trochanter prominent and armed with a seta at its most prominent part, the slender portion of the femur bearing three elongate erect setæ.

We have received a series of twelve examples of this interesting insect, most of which are unfortunately in a very fragile and mutilated condition.

2. **Hecotus mexicanus.**

Fulvus, dense pubescens; capite transverso; antennis palpisque maxillaribus geniculatis; prothorace parce punctulato; elytris ad basin seriatim punctatis, dense pubescentibus.
Long. 2⅝ millim.

Hab. Mexico, Soledad in Vera Cruz (*Sallé*).

We have received only a single example of this insect, and though very closely allied to *H. agilis* it appears to me to be probably distinct. The antennæ are less elongate, the basal joint being shorter and thicker. The thorax is considerably less elongate, its basal canaliculation more obscure, and the surface bears a distinct though feeble and distant punctuation. The elytra are less elongate, more curvate at the sides, with a denser pubescence and a more definite basal punctuation. The legs also are less elongate.

Fam. SILPHIDÆ *.

The Silphidæ of Central America, to judge from the present collection, appear to be remarkable for the rarity of forms usually the most abundant, such as the tribes 'Cholevina' and 'Silphina'; and for the peculiar type of the 'Anisotomina,' which exhibit a great prevalence of species anatomically allied to *Agathidium*. The most abundant of these latter belong to the genus *Aglyptus*, first characterized by Dr. Leconte from a species of rare occurrence in the United States. In Central America *Aglyptus* seems to be the representative genus of its tribe, and numerically furnishes the majority of specimens contained in this collection.

In this Family I have not given any Synoptic Tables, because the genera, with but few exceptions, are already well known, and for the most part contain respectively but few species, which may easily be discriminated from each other. The descriptions, especially of the new genera and species, will be found more diffusive than was perhaps positively required in a work which does not in any way assume the character of a monograph; but it is always better in describing to say too much than too little, for among closely-allied species a minute and apparently unimportant character will often lead to a correct determination. The plan of devoting a separate sentence to each main division of the body renders recognition very much easier than the chaotic descriptions often met with, in which the various parts are so mixed up, that it becomes difficult to discover to which of them the words under consideration refer; in many such descriptions characters of the head or thorax, omitted in their proper place, are often found noticed after a long description of the elytra, or some other part.

In the anatomy I have always designated the extreme organ of the lower part of the mouth the "lingua"; the term "ligula," often applied to this part having been used so indiscriminately for this organ, or for the labium, or for them both in connection, that it has lost all definitive value, and has, in fact, become a source of perplexity. That the lingua is a distinct organ of the mouth may be clearly seen in any of the larger species of *Silpha*, in all of which it is largely developed; it arises from the inner side of the labium near to its base, and may easily be dissected from that organ. Indeed the parts often supposed to be paraglossal appendages of the labium are, at least in the genus *Silpha*, integral parts of the lingua, and are probably so in many other genera. The substance of the lingua is generally soft and contractile, and therefore liable, when dried, to lose its natural shape; but in *Silpha* the lingua is more than usually chitinous, and may always be seen behind the labial palpi as a somewhat fan-shaped organ extending far beyond the anterior extremity and the sides of the labium.

* By A. Matthews.

CLAMBINA.

CLAMBUS.

Clambus, Fischer, Ent. Russ. Gen. i. p. 52 (1820).

Body perfectly contractile. *Head* very large and flat, with deep antennal grooves on the underside. *Thorax* small, transverse. *Elytra* large, entire, exceedingly convex. *Antennæ* 9-jointed, 1 rather short and robust, 2 very long and slender, 3–7 gradually shorter, 8 and 9 forming a much incrassated club. *Prosternum* short; *episterna* very small; *epimera* small, but distinct, not enclosing the coxal cavities; coxal cavities moderate, suboblong, with a foramen at the outer extremity, partly closed posteriorly by a dilated process of the prosternum. *Mesosternum* moderate, very deeply excised in front; *episterna* humeral, long, and narrow; *epimera* rather large, extending to the coxal cavities; coxal cavities very large and very oblique, elongate-oval, moderately distant. *Metasternum* rather large, scarcely reaching the sides of the body; *episterna* long and very narrow, produced anteriorly below the coxal cavities, and almost reaching the posterior coxæ; *epimera* very narrow, with their extremities only visible. *Venter* composed of five nearly equal segments. *Legs* very long and very slender; tarsi 4-jointed, with the first joint the longest. *Coxæ*: *anterior* large, contingent, and very prominent; *intermediate* very long and large, not contingent, prominent; *posterior* contingent, very large, extending to the sides of the body, and furnished for their whole extent with broad, circularly rounded laminæ.

Numerous species of this genus have been described from Europe, North America, the Canary Islands, Ceylon, &c.; I have to record two from Central America.

1. Clambus gibbulus.

Clambus gibbulus, Lec. in Agassiz's Lake Sup. p. 222; Proc. Ac. Phil. 1853, p. 286 [1]; Horn, Trans. Am. Ent. Soc. viii. p. 312 [2].

Ovatus, validissime convexus, nigro-piceus, pronoti marginibus late dilutioribus, glaber, nitidissimus; capite rufo-piceo, permagno, lato, clypeo valde dilatato, antice rotundato, lateraliter producto; oculis magnis, prominentibus; pronoto transverso, quam caput parum longiore et latiore, nigro, lateribus atque basi rufo-piceis, glabro, nitidissimo, lateribus valde rotundatis, margine basali rotundata angulis fere obsoletis; elytris semiovatis, quam caput atque pronotum nec longioribus neque latioribus, prope media latissimis, glabris, nitidissimis, lateribus leviter marginatis, angulis subhumeralibus sat prominentibus, apice acuminato; pedibus atque antennis longis, gracilibus, læte flavis. Long. corp. $\frac{9}{16}$ lin.=1·12 millim.

Body ovate, exceedingly convex, nigro-piceous, with the sides and base of the thorax broadly pale, not pubescent, smooth, and very shining. *Head* rufo-piceous, very large and broad; clypeus much dilated, rounded in front, and much produced at the sides; eyes large and prominent; antennæ rather long and slender, bright yellow. *Thorax* transverse, rather longer and broader than the head, smooth and very shining; sides much rounded; basal margin rounded, with the angles almost obsolete. *Scutellum* moderate, triangular. *Elytra* semiovate, not longer nor broader than the head and thorax, widest near the middle, smooth and very shining; sides slightly margined, with the subhumeral angles rather prominent; apex acuminate. *Legs* long and slender, bright yellow.

Hab. North America, Canada to Texas [2], Michigan [1].—Guatemala, near the city (*Champion*).

Differs from the following species in its ovate form, longer and broader head and thorax, greater dilatation of the clypeus, and paler sides of the thorax. One specimen.

2. **Clambus exiguus,** sp. n.

Ovalis, validissime convexus, niger, angulis posterioribus pronoti sat late dilutioribus, glaber, nitidissimus; capite magno, sat longo, clypeo antice valde rotundato, lateraliter haud dilatato; oculis sat parvis; pronoto parvo, brevi, quam caput parum breviore et latiore, ad basin latissimo, lateribus rotundatis, margine basali fere recta angulis sat obtusis; elytris semiovalibus, quam caput atque pronotum parum longioribus, haud latioribus, ante media latissimis, leviter et indistinctissime punctatis, angulis subhumeralibus sat prominentibus, apice obtuso; pedibus atque antennis modicis, gracilibus, læte flavis, harum clavis parum obscurioribus. Long. corp. $\frac{8}{16}$ lin. = 1·0 millim.

Body oval, exceedingly convex, black, with the hinder angles of the thorax broadly pale, smooth and very shining. *Head* large and rather long, with the clypeus much rounded in front, but not dilated laterally; eyes rather small; antennæ moderate, slender, bright yellow, with the club rather darker. *Thorax* small and very short, rather shorter and broader than the head, widest at the base; sides rounded; basal margin nearly straight, with the angles rather obtuse. *Scutellum* rather small, triangular. *Elytra* semioval, rather longer but not broader than the head and thorax, widest before the middle, slightly and very indistinctly punctured, very shining; subhumeral angles distinct; apex obtuse. *Legs* moderate, slender, bright yellow. *Underparts* piceous, with the mouth yellow.

Hab. GUATEMALA, San Gerónimo (*Champion*). One example.

Differs from *C. gibbulus* in its smaller size, longer head, much shorter and smaller thorax, and obtuse apex of the elytra.

ANISOTOMINA.

AGATHIDIUM.

Agathidium, Illiger, Kugel. Verz. Käf. Preuss. p. 81 (1798).

Body either wholly or partially contractile. *Head* large and flat, with deep antennal grooves on the underside. *Thorax* generally large, transverse, and very convex, often much dilated and rounded at the sides, the base much rounded and incumbent on the shoulders of the elytra. *Elytra* entire, exceedingly convex. *Antennæ* arising beneath the frontal plate, 11-jointed, 1 and 2 large, 8–11 forming a much incrassated club. *Prosternum* very small and short; *episterna* small, triangular; *epimera* moderate, not enclosing the coxal cavities; coxal cavities large and contingent, open both in front and behind, with a large foramen at the outer extremities. *Mesosternum* moderate, very deeply excised anteriorly; *episterna* humeral, long, and narrow; *epimera* rather large, reaching to the coxal cavities; coxal cavities oblique, very large and very long, moderately distant. *Metasternum* short, nearly extending to the sides of body; *episterna* long and narrow, not reaching to the coxæ; *epimera* long and narrow, extending to the coxæ; coxæ very long and large, nearly reaching to the sides, almost contingent. *Venter* composed of six segments, with the apical segment very small. *Coxæ*: *anterior* contingent, large, and prominent; *intermediate* not contingent, very large and prominent; *posterior* almost contingent, very large and long. *Tarsi* in the male 5-, 4-, 4-jointed, in the female 4-, 4-, 4-jointed.

This well-known genus contains a large number of described species, nearly all of which are from Europe and temperate North America; five species are now recorded from Mexico or Guatemala.

1. **Agathidium oniscoides.**

Agathidium oniscoides, Beauv. Ins. Afr. et Amér. p. 160, t. 6. f. 2 [1]; Lec. Proc. Ac. Phil. 1853, p. 285 [2].

Agathidium piceum, Melsh. Proc. Ac. Phil. ii. p. 103 (1844) [3] (nec Erichs.).

Omnino contractibile, orbiculare, nigrum, nitidissimum, glaberrimum; capite magno, antice lato, punctis exiguis, remotis, indistincte notato, epistoma integra, una cum ore flavescente; oculis modicis, vix prominentibus; pronoto quam caput multo longiore, validissime convexo, duplo latiore quam longo, translucide piceo, lateribus una cum basi continuo rotundatis et leviter marginatis, angulis anterioribus rotundatis et valde prominentibus; elytris semiorbicularibus, angulis inferioribus humeralibus obsoletis, superficie impunctata sed inæquali, capite atque pronoto fere pariter longis et latis, ad media latissimis, stria suturali brevissima ad apices impressis, apicibus haud acuminatis, lateribus sat late marginatis, margine ipsa rufo-picea; pedibus sat longis, rufo-piceis; antennis sat longis, rufescentibus, clavis obscurioribus. Long. corp. $1\frac{10-12}{16}$ lin.=3·25–3·50 millim.

Body perfectly contractile, orbicular, black, very smooth and shining. *Head* large, broad in front, indistinctly marked with minute, remote punctures; epistoma not emarginate, and, together with the mouth, flavescent; eyes moderate, slightly prominent; antennæ rather long, rufescent, with the club dusky. *Thorax* exceedingly convex, much longer than the head, and twice as broad as long, transparently piceous; sides and base continuously rounded and slightly margined; anterior angles rounded and very prominent. *Elytra* semiorbicular, with the inferior humeral angles obsolete, impunctate but uneven on the surface, as long and as broad as the head and thorax, widest at the middle, with a very short sutural stria at the apex; sides rather broadly margined, with the margin rufo-piceous; apex not acuminate. *Legs* rather long, rufo-piceous. *Underparts* rufo-castaneous; mesosternum faintly carinated; metasternum dusky and alutaceous.

Hab. North America [1] [2], Pennsylvania [3].—Mexico, Jacale (*Sallé*).

2. **Agathidium californicum.**

Agathidium californicum, Horn, Trans. Am. Ent. Soc. viii. p. 303 [1].

Omnino contractibile, fere orbiculare, nigrum, nitidissimum, punctis remotis obsoletissimis impressum; capite magno, indistincte alutaceo, antice lato; epistomate ad medium sinuato, reflexo, flavescente; oculis sat magnis prominentibus; ore flavo; pronoto quam caput vix longiore, fere duplo latiore quam longo, valde convexo, indistincte alutaceo, basi atque lateribus continuo rotundatis et leviter marginatis, angulis anterioribus rotundatis et valde prominentibus; elytris subovatis, quam caput atque pronotum parum longioribus, haud latioribus, ante media latissimis, indistincte alutaceis, stria suturali profunda ab apice usque ad medium impressis, lateribus marginatis, margine dilutiore, apicibus sat acuminatis; pedibus modicis, rufo-ferrugineis; antennis modicis, articulis sex basalibus rufis, cæteris obscurioribus. Long. corp. $1\frac{2}{16}$ lin.= 2·25 millim.

Body perfectly contractile, almost orbicular, black and very shining, marked with remote, very obsolete punctures. *Head* rather large, indistinctly alutaceous, broad in front, epistoma flavescent and sinuated in the middle; mouth yellow; eyes rather large, prominent; antennæ moderate, with the basal six joints rufous, and the remainder dusky. *Thorax* scarcely longer than the head, nearly twice as broad as long, very convex, indistinctly alutaceous; the sides and base continuously rounded and slightly margined; anterior angles very much produced and rounded. *Elytra* rather ovate, somewhat longer but not broader than the head and thorax, widest before the middle, indistinctly alutaceous, with a deeply impressed sutural stria extending from the middle to the apex; sides margined, the margin pale; apex rather acuminate. *Legs* moderate, rufo-ferruginous. *Underparts* rufo-castaneous; mesosternum carinated; metasternum alutaceous.

Hab. North America, California, Nevada, and Washington territory [1].—Guatemala, Quiche Mountains, 7000 to 9000 feet (*Champion*).

3. **Agathidium exiguum.**

Agathidium exiguum, Melsh. Proc. Ac. Phil. ii. p. 103 (1844) [1]; Horn, Trans. Am. Ent. Soc. viii. p. 303 [2].

Omnino contractibile, orbiculare, nigrum, glaberrimum, nitidissimum, punctis exiguis, remotis, indistinctissimis impressum; capite magno, lato, clypeo lato, rotundato, margine reflexa, antice emarginato, epistomate sat

magno, integro, flavo, ore testaceo; oculis modicis, vix prominentibus; pronoto sat magno, validissime convexo, quam caput longiore, vix duplo latiore quam longo, nigro, lateribus atque basi continuo rotundatis, leviter marginatis, angulis anterioribus rotundatis, parum prominentibus; elytris brevibus, semiorbicularibus, quam caput atque pronotum multum brevioribus, mediis latissimis, stria suturali ab apice fere ad media extensa, lateribus marginatis, angulis subhumeralibus obsoletis, apice circulariter rotundato; pedibus robustis, rufo-piceis; antennis brevibus, articulis quinque basalibus rufis, cæteris obscurioribus. Long. corp. $1\frac{1}{16}$ lin. = 2·12 millim.

Body perfectly contractile, orbicular, black, very smooth and shining, indistinctly marked with minute remote punctures. *Head* large and broad, rather more distinctly punctured; clypeus broad, with the margin rounded and reflexed, emarginate in front, the epistoma rather large, entire, and yellow; mouth testaceous; eyes moderate, scarcely prominent; antennæ short, with the basal five joints rufous and the remainder dusky. *Thorax* rather large, exceedingly convex, longer than the head, scarcely twice as broad as long, black; sides and base continuously rounded, slightly margined; anterior angles rounded, moderately prominent. *Elytra* short, semiorbicular, much shorter than the head and thorax, widest at the middle; sutural stria reaching from the apex nearly to the middle sides; margined, with the subhumeral angles obsolete; apex circularly rounded. *Legs* robust, rufo-piceous. *Underparts* rufo-testaceous; mesosternum carinated anteriorly; metasternum alutaceous.

Hab. North America, Pennsylvania [1], Colorado [2].—Guatemala, Cerro Zunil 4000 to 5000 feet, Capetillo (*Champion*).

This species may be known by its more evidently punctured head, and very short and circularly rounded elytra; it is distinguished from *A. difficile* by its much larger head and thorax.

4. **Agathidium difficile,** sp. n.

Omnino contractibile, fere orbiculare, nigrum, nitidissimum, punctis minutis, remotis, vix conspicuis impressum; capite sat parvo, clypeo antice lato, haud emarginato, epistomate fere rudimentario; oculis modicis, prominentibus; pronoto validissime convexo, brevissimo, punctis exiguis remotis indistinctis impresso, interstitiis levissime alutaceis, quam caput parum longiore, duplo latiore quam longo, nigro, lateribus atque basi continuo rotundatis, leviter marginatis, angulis anterioribus rotundatis, valde prominentibus; elytris semiorbicularibus, quam caput atque pronotum nec longioribus neque latioribus, mediis latissimis, nitidissimis, indistincte alutaceis, linea tenui suturali per tota extensa atque alia magis profunda ab apice usque ad media impressis, lateribus marginatis, angulis subhumeralibus obsoletis, apice haud acuminato; pedibus modicis, rufo-piceis; antennis sat gracilibus, rufescentibus, clavis obscurioribus. Long. corp. $1\frac{1}{16}$ lin. = 2·12 millim.

Body perfectly contractile, almost orbicular, black, very shining, marked with minute, remote, indistinct punctures. *Head* rather small; clypeus broad and not emarginate in front; epistoma almost rudimentary; eyes moderate, rather prominent; antennæ rather slender, rufescent, with the club dusky. *Thorax* very short and very convex, indistinctly marked with very minute remote punctures, with the interstices faintly alutaceous, a little longer than the head and twice as broad as long, black; sides and base continuously rounded and lightly margined; anterior angles rounded and very prominent. *Scutellum* large, triangular, smooth, and shining. *Elytra* semiorbicular, not longer nor broader than the head and thorax, widest at the middle, very shining, indistinctly alutaceous, with a fine line on each side of the suture, extending from the base to the apex, and a shorter and more deeply impressed line from the apex to the middle; sides margined, with the subhumeral angles obsolete; apex circularly rounded. *Legs* moderate, rufo-piceous. *Underparts* rufo-piceous.

Hab. Mexico, Cerro de Plumas (*Höge*).

This species differs from the others here described in its small size, comparatively smaller head, and shorter thorax; and also by the circularly rounded elytra, and the line on each side of the suture, in addition to the usual sutural stria.

5. **Agathidium cognatum,** sp. n. (Tab. III. fig. 2.)

Late ovatum, haud contractibile, validissime convexum, castaneum, fortiter et irregulariter punctatum, nitidissimum; capite sat parvo, prominente, sat profunde et remote punctato, clypeo antice sat profunde excavato, epistomate magno, convexo, corneo, margine anteriore rotundata, integra et leviter reflexa, ore valde prominente; oculis magnis, prominentibus; pronoto brevissimo, quam caput haud longiore, triplo latiore quam longo, ad basin latissimo, minutissime et indistincte punctato, interstitiis glabris, nitidissimis, lateribus marginatis et leviter rotundatis, angulis anterioribus vix prominentibus, margine basali fere recta angulis fere rectis; elytris permagnis, validissime convexis, quam caput atque pronotum latioribus et plus quam duplo longioribus, prope humeros latissimis, fortiter et irregulariter punctatis, interstitiis glabris, nitidissimis, stria suturali leviter impressa, ab apice usque ad media extensa, lateribus rotundatis et marginatis, angulis subhumeralibus prominentibus, apice acuminato; pedibus elongatis, gracilibus, tarsis gracilibus; antennis articulis sex basalibus rufis, cæteris obscuris, tertio elongato, septimo atque octavo brevissimis, dilatatis, tribus ultimis valde incrassatis clava subfoliata formantibus. Long. corp. $1\frac{4}{16}$ lin. = 2·50 millim.

Body broadly ovate, not contractile, exceedingly convex, strongly and irregularly punctured, castaneous, and very shining. *Head* rather small, prominent, rather deeply and remotely punctured, clypeus somewhat deeply hollowed in front, with the epistoma corneous, large, and convex, with its anterior margin entire, rounded, and slightly reflexed; mouth very prominent; antennæ with the third joint elongate, the seventh and eighth joints very short and much dilated internally, the last three very much incrassated, forming a subfoliate club, the basal six joints rufous, the remainder dusky. *Thorax* very short, not longer than the head, three times broader than long, widest at the base, minutely and indistinctly punctured, with the interstices smooth and very shining; sides margined and faintly rounded; anterior angles slightly prominent; basal margin almost straight, with the angles subrectangular. *Scutellum* moderate, triangular, alutaceous. *Elytra* very large and broad, exceedingly convex, broader and more than twice as long as the head and thorax, widest near the shoulders, strongly and irregularly punctured, with the interstices smooth and very shining; sutural stria moderate, extending from the apex to the middle, sides rounded and margined, with the subhumeral angles prominent; apex acuminate. *Legs* long and slender; tarsi slender, 5-, 4-, 4-jointed. *Underparts* pale castaneous.

Hab. GUATEMALA, Totonicapam 10,500 feet (*Champion*). One specimen.

This remarkable species appears to belong to Dr. Horn's division "B" of the genus *Agathidium* (*cf.* "Synopsis of the North-American Silphidæ," Trans. Am. Ent. Soc. viii. pp. 219–321), and to be allied to *A. estriatum*. *A. cognatum* may possibly be identical with *A. estriatum*; but I hesitate to identify it with that species on account of the non-contractile form of the body, the length of the legs, the peculiar proportions of the joints of the antennæ, and the convexity and sculptural difference of the head.

AGLYPTUS.

Aglyptus, Leconte, Proc. Ac. Phil. 1866, p. 369; Horn, Trans. Am. Ent. Soc. viii. p. 307 (1880).

Body hemispheric, not perfectly contractile. *Head* sessile, flat; clypeus faintly marked; antennal grooves distinct. *Thorax* very short, transverse; front deeply excised at the anterior angles, and rounded between them. *Scutellum* triangular. *Elytra* large, entire; epipleural folds very broad. *Wings* ample. *Antennæ* slender, 11-jointed, 1 and 2 moderately large, 3 very slender, longer than 2, 4–6 each shorter than 3, nearly equal to each other, 7 very large, much incrassated, 8 very small, 9 and 10 rather larger than 7, pedunculated, 11 much longer than 10, suboval. *Palpi*: *maxillary* long and slender, 4-jointed, 1 very small, 2 much longer and broader, pyriform, with the apex hollowed, 3 longer than 2, cylindrical, 4 long and slender, sharply pointed; *labial* short and robust, 3-jointed, 1 and 2 subquadrate, nearly equal, 3 rather longer, obtusely oval. *Labrum* large and broad, emarginate in front, with each extremity circularly rounded and broadly translucent, with a very long seta on each side, and several shorter setæ towards the

middle. *Mandibles* diverse in shape, one being sharply hooked, and armed with a sharp tooth below the hooked apex, the other shorter and almost simple. *Maxillæ* short and stout, bilobed, with the outer lobe short and broad, furnished with very long incurved setæ at the extremity; inner lobe large and broad, ciliated on the inner edge; stipes short and robust. *Mentum* short and very broad, hollowed in the middle, and much rounded at the anterior angles. *Labium* rather small, suboblong, and produced anteriorly between the palpi. *Lingua* small, apparently subquadrate. *Prosternum* small; *episterna* small, triangular; *epimera* rather large, partly enclosing the coxal cavities; coxal cavities large, contingent, open both in front and behind, with a large foramen at the outer extremity. *Mesosternum* moderate, not much excised in front; *episterna* moderate, rather narrow; *epimera* long and oblique, reaching to the coxal cavities; coxal cavities exceedingly large, suboval, with a large foramen at the outer extremities, nearly contingent. *Metasternum* large, transversely oblong, nearly reaching to the sides of the body, and produced posteriorly into two short, but very acute denticulations between the coxæ; *episterna* long and very narrow, not so long as the metasternum; *epimera* very long, extending beyond the coxæ. *Venter* composed of five segments; the basal segment twice as long as either of the others and slightly but broadly elevated in a curved line at its base, enclosing the whole length of the coxa; the other segments nearly equal to each other in length. *Legs* very slender: *anterior* rather short, with the femora laminated on the inside; tibiæ not dilated, armed with short apical spurs; tarsi 3-jointed in the female, indistinctly 4-jointed in the male; claws very slender, simple; *intermediate* rather longer, with the femora robust, broadly laminated on the inside; tibiæ setose, armed with apical spurs; tarsi 3-jointed in both sexes, the basal joint long, and furnished with short setæ on the sides; *posterior* similar to the intermediate, but longer. *Coxæ*: *anterior* large, subconical, contingent and very prominent; *intermediate* very large, not contingent, prominent; *posterior* large, nearly reaching the sides of the body, separated by the bifid process of the metasternum.

Aglyptus, first characterized as a genus by Dr. Leconte, from a species of rare occurrence in the United States, appears to be the prevailing form of the "Anisotomina" in Central America, where at least two species seem to be abundant. In the whole of the external skeleton the genus much resembles *Scotocryptus* and *Creagrophorus*: all are alike in the shape of the prosternum, with its doubly open coxal cavities, and in this respect also resemble *Agathidium*; but they differ from that genus in many particulars, and especially in the elevated portion of the first ventral segment, and in the transverse strigation of the posterior femora, these characters separating them from other genera of this tribe. From *Scotocryptus* and *Creagrophorus*, *Aglyptus* may be known by its long and diversely formed antennæ and slender legs.

1. **Aglyptus horni,** sp. n. (Tab. III. fig. 3.)

Late ovalis, validissime convexus, castaneus, glaber, nitidissimus, punctis minutis totus indistincte notatus; capite modico, epistomate semiovali, flavo, ore flavo, prominente; oculis magnis, valde prominentibus; pronoto quam caput latiore, vix longiore, ad basin latissimo, margine anteriore atque lateribus flavescentibus, marginatis et reflexis, angulis anterioribus parum productis, margine basali fere recta angulis fere rectis; elytris semiovalibus, quam caput atque pronotum longioribus, vix latioribus, ad humeros latissimis, stria suturali indistincta impressis, lateribus rotundatis, late marginatis, apice obtuso; pedibus modicis, gracilibus, rufo-testaceis, tarsis triarticulatis; antennis longis, gracilibus, rufo-testaceis, articulis quinque apicalibus obscuris. Long. corp. $1\frac{2}{16}$ lin. = 2·25 millim.

Body broadly oval, exceedingly convex, castaneous, smooth and very shining, marked throughout with minute and very indistinct punctures. *Head* moderate; epistoma semioval, yellow; mouth prominent, yellow; eyes large and very prominent; antennæ long and slender, rufo-testaceous, with the apical five joints dusky. *Thorax* broader, but scarcely longer, than the head, widest at the base; anterior margin and sides flavescent, margined and reflexed; anterior angles slightly produced; basal margin nearly straight,

with the angles subrectangular. *Scutellum* rather long, triangular. *Elytra* semioval, longer but scarcely broader than the head and thorax, widest at the shoulders, with a faint stria on each side of the suture; sides rounded and broadly margined; apex obtuse. *Legs* moderate, slender, rufo-testaceous; tarsi long. *Underparts* rufo-castaneous.

Hab. GUATEMALA, Quiche Mountains, Cerro Zunil, Capetillo, Guatemala city, Balheu (*Champion*).

Differs from *A. lævis* in its larger size, obtusely rounded elytra, evident punctuation, and castaneous colour.

An example from Capetillo is figured.

2. **Aglyptus lævis.**

Colenis (?) *lævis*, Lec. Proc. Ac. Phil. 1853, p. 284[1].

Aglyptus lævis, Horn, Trans. Am. Ent. Soc. viii. p. 308[2].

Ovatus, validissime convexus, piceus, glaber, nitidissimus; capite magno, lato, ore flavo; oculis magnis, haud prominentibus; pronoto quam caput longiore et latiore, ad basin latissimo, lateribus sat late flavis, marginatis et reflexis, margine basali fere recta angulis obtusis; elytris semiovatis, quam caput atque pronotum longioribus, haud latioribus, ante media latissimis, postice sat attenuatis, stria suturali indistincta impressis, lateribus marginatis; pedibus modicis, rufo-testaceis, tarsis 3-articulatis; antennis modicis, flavescentibus, articulis 7, 9, 10, 11 obscuris. Long. corp. $\frac{13}{16}$ lin.=1·63 millim.

Body ovate, rather attenuated posteriorly, exceedingly convex, piceous, smooth and very shining. *Head* large and broad; mouth yellow; eyes large, not prominent; antennæ moderate, rufo-testaceous, with joints 7–9, 10, 11 dusky. *Thorax* longer and broader than the head, widest at the base; sides rather broadly yellow, margined and reflexed; basal margin nearly straight, with the angles obtuse. *Scutellum* moderate, triangular. *Elytra* semiovate, longer but not broader than the head and thorax, widest before the middle, rather attenuated posteriorly; sutural stria very indistinct; sides rounded and margined. *Legs* moderate, rufo-testaceous; tarsi 3-, 3-, 3-jointed. *Underparts* rufo-testaceous.

Hab. NORTH AMERICA, Canada[2], Illinois[2], Georgia[1 2], Louisiana[2].—PANAMA, Volcan de Chiriqui (*Champion*).

Differs from *A. horni* in its narrower and more ovate form, smaller size, broader head, longer thorax, more robust antennæ, piceous colour, and more glabrous surface.

This species, which appears to be abundant in Chiriqui, may be known by its exceedingly convex form, smooth, very shining, and apparently impunctate surface, slender legs and antennæ, slightly ovate elytra, and piceous colour.

3. **Aglyptus (?) minor,** sp. n.

Subhemisphæricus, niger, glaberrimus, nitidissimus; capite magno, lato, ore concolore; oculis sat parvis, haud prominentibus; pronoto quam caput parum longiore, multo latiore, ad basin latissimo, lateribus marginatis et anguste pallidis, margine basali dilutiore, fere recta, angulis fere rectis; elytris fere semicircularibus, quam caput atque pronotum sat longioribus atque latioribus, prope media latissimis, indistinctissime punctulatis, lateribus valde rotundatis, levissime marginatis; pedibus sat brevibus, rufo-testaceis, tarso unico relicto 3-articulato; antennis gracilibus, longis, flavis, clavis obscurioribus. Long. corp. $\frac{8}{16}$ lin.=1 millim.

Body subhemispheric, black, very smooth and very shining. *Head* large and broad; mouth concolorous; eyes rather small, not prominent; antennæ, apparently, long and slender, yellow, with the club dusky. *Thorax* rather longer and much broader than the head, widest at the base; sides margined and narrowly pale;

basal margin nearly straight, with the edge pale and the angles nearly right angles. *Scutellum* small, triangular, obtuse, and smooth. *Elytra* almost semicircular, rather longer and rather broader than the head and thorax, widest near the middle, microscopically punctulate, the sides much rounded and slightly margined. *Legs* rather short, rufo-testaceous; tibiæ spinose externally and armed with strong spurs; tarsi 3-jointed. (*Obs.* This is the description of a posterior leg; all the rest are missing.) *Underparts* wholly black.

Hab. GUATEMALA, Senahu (*Champion*). One specimen.

I have been induced to place this insect in the present genus from the similarity which it bears to the preceding species in its general external appearance; and from the facts that the only leg it possesses has a three-jointed tarsus, and that the seven remaining joints of its one antenna correspond to those of *Aglyptus* more closely than to those of any other genus of this tribe. But with such imperfect material it is difficult to determine its generic affinities with any accuracy.

SCOTOCRYPTUS.

Scotocryptus, Girard, Bull. Soc. Ent. Fr. (5) iv. p. cv, and Ann. p. 574 (1874); Sharp, Compt. Rend. ent. Soc. Belg. 1885, pp. xxi & xxii (1885); Horn, Entom. Amer. i. p. 51 (1885).

Body entirely hemispheric. *Head* sessile, short and broad; clypeus distinctly marked, corneous; antennal grooves very distinct. *Thorax* very short, transverse, with the sides and front continuously rounded. *Scutellum* triangular. *Elytra* large, entire; epipleural fold broad. *Antennæ* arising beneath the frontal plate, 11-jointed, joint 1 long and robust, 2 smaller than 1, 3 slender, longer than 2, 4 shorter than 3, 5 and 6 of the same shape as 4, 7 very large, 8 smaller than 7, 9–11 forming a slightly incrassated club, 11 the largest, obtusely pointed. *Palpi*: *maxillary* short and very robust, 4-jointed, 1 very small, 2 much larger, trsnsverse, 3 twice as long as 2, but not broader, 4 nearly as long as 3, obtusely pointed; *labial* short and robust, 3-jointed, 1 rather short, 2 longer, 3 obtusely conical. *Labrum* very short and broad, with the basal angles produced; sides rounded, slightly hollowed in front, and furnished with a few very short setæ. *Mandibles* large, short and stout, very sharp at the point, armed immediately below the point with a large and very sharp tooth; base very broad and much incrassated. *Maxillæ* short and robust, bilobed: *exterior lobe* short and broad, 2-jointed; basal joint short and rounded; terminal joint setose at the extremity; *inner lobe* large and broad, with the apex obliquely truncate and furnished with long setæ; stipes very robust. *Mentum* very short, transverse, subquadrate, widest at the base; *submentum* of the same shape inversed, armed at its base with two very long, straight, and very sharp spines, rather more distant from each other than from the sides of the submentum. *Labium* short and broad, produced between the palpi into a broad triangular point. *Lingua* large, quadrate, furnished in the middle of its anterior margin with short setæ. *Prosternum* rather short, elevated between the coxæ into a very thin carina; *episterna* very small and narrow; *epimera* moderate, not extending behind the cavities; coxal cavities very large, open in front and behind. *Mesosternum* very short, elevated between the coxæ into a small lanciform plate; *episterna* rather large, humeral; *epimera* moderate, much elongated anteriorly, reaching to the coxal cavities; coxal cavities very large, oval, extending far into the metasternum, with a large foramen at the outer extremity. *Metasternum* very short, extending to the sides of the body, and produced between the posterior coxæ into a small quadrate plate, the plate pointed at each of its extremities and divided from the metasternum proper by a distinct suture; *episterna* and *epimera* small and narrow, concealed by the elytra, with the incurved apex of the latter alone visible; coxæ very large, pyriform and oblique, not extending to the sides of the body. *Venter* composed of five segments; the basal segment the longest, and elevated on each side into a very large triangular smooth plate. *Legs* short and robust: *anterior* femora laminated on the inner side; tibiæ slightly dilated towards the apex, armed with a single strong spur on the outside near the apex; tarsi rather short, 3-jointed, 1 twice as long as 2, and

furnished on the underside with pilose, laminated processes, 3 long and slender; claws simple; *intermediate* femora very short, broadly laminated on the inner side; tibiæ short, moderately dilated towards the apex, slightly recurved, armed with two apical spurs on the outside; tarsi 3-jointed, 1 very large and long, pectinated on the sides with short spurs, and furnished on the underside with pilose laminated processes, 2 small and bifid, 3 long and slender; claws simple; *posterior* femora rather longer; tibiæ slightly recurved, dilated on the inner side near the middle, and strongly corrugated on the inner surface in transverse lines, armed with apical spurs on both sides; tarsi 3-jointed, much longer than the intermediate pair, but simple. *Coxæ*: *anterior* almost contingent, large, and very prominent; *intermediate* not contingent, very large and prominent; *posterior* separated by the metasternal process, very large, oblique, and pyriform. The basal articulation of the anterior tarsus in some positions indistinctly appears to be composed of two joints, of which the posterior is very short.

This very distinct and interesting genus in some respects resembles *Creagrophorus*, especially in the shape of the prosternum with its doubly open coxal cavities, and in the broad smooth triangular space on each side of the first ventral segment, and also in the number and relative proportions of the joints of its antennæ and five ventral segments; but differs from that genus in its laminated and peculiarly formed anterior and intermediate tarsi, in the rounded front of the pronotum, and notably in the anatomy of its mouth.

Like *Creagrophorus*, it seems to approach nearer to *Cyrtusa* than to any other genus of "Anisotomina;" and from the general shape of its body and form of its antennæ *Scotocryptus* should be placed in the vicinity of *Cyrtusa*.

The polished and elevated plates on each side of the first ventral segment and the corrugated condition of the inner side of the posterior tibiæ might suggest the idea that *Scotocryptus* possesses the power of stridulation. It has been supposed that the well-known stridulation of *Acherontia atropos* assists that insect in plundering the hives of the Honey-Bee; and if this be true, it may reasonably be inferred that a similar faculty would be equally serviceable to *Scotocryptus*.

The figure and description of *Scotocryptus meliponæ* given by Girard (Ann. Soc. Ent. Fr. 1874, pp. 574, 576, & 577, figs. 1–9) differ considerably from *S. inquilinus*. If Girard's figure faithfully represents *Scotocryptus*, which is doubtful, it is not surprising that, as he there mentions, M. Ch. Brisout should have thought that it belonged to the "Cholevina;" but such an idea could never have been suggested by the appearance of *S. inquilinus*, whose affinity to *Cyrtusa* is strongly marked in every part of its body, and especially in the antennæ and legs.

Three species of *Scotocryptus* have been described, all from Brazil; a fourth is now recorded from Guatemala. These insects appear to live entirely in the nests of honey-making Bees of the genus *Melipona*.

1. **Scotocryptus inquilinus**, sp. n. (Tab. III. fig. 4.)

Omnino hemisphæricus, pilis perbrevibus aureis remotissime indutus, rufus vel rufo-castaneus, vix nitidus; capite permagno, lato, minute, sat confertim punctato, interstitiis alutaceis, ore haud prominenti, oculis nullis; pronoto parvo, brevi, quam caput latiore haud longiore, ad basin latissimo, minute et confertim punctato, interstitiis sat profunde alutaceis, lateribus rotundatis et leviter marginatis, margine basali leviter

arcuata, angulis omnibus obtusis; elytris semicircularibus, quam caput atque pronotum nec longioribus, neque latioribus, ad humeros latissimis, profunde, transverse strigosis, aut asperatis, lateribus rotundatis et marginatis; pedibus modicis, rufo-testaceis, femoribus simplicibus, tibiis ad apices parum dilatatis, externe vel utrinque calcari brevi instructis, tibiis posterioribus leviter recurvatis, atque intus tenuiter spinosis, tarsis omnibus triarticulatis, articulis basalibus processibus coriaceis subtus instructis; antennis sat gracilibus, rufo-testaceis, clavis levissime incrassatis. Long. corp. 1 lin.=2 millim.

Body perfectly hemispheric, furnished with very short golden hairs at wide intervals, rufous or rufo-castaneous, slightly shining. *Head* very large and broad, minutely and rather closely punctured, with the interstices alutaceous; mouth not prominent; eyes wanting; antennæ moderate, rather slender, with the club but slightly incrassated, placed below the frontal plate immediately in front of the eyes. *Thorax* small and short, broader but not longer than the head, widest at the base, minutely and rather closely punctured, with the interstices strongly alutaceous; sides rounded and slightly margined; basal margin faintly arcuate; all the angles obtuse. *Scutellum* short and broad, triangular, alutaceous. *Elytra* semicircular, not longer or broader than the head and thorax, widest at the shoulders, transversely and deeply strigose or asperated; sides rounded and margined. *Legs* moderate, rufo-testaceous; femora simple; tibiæ slightly dilated towards the apex, and there armed on the outside or on both sides with a short spur; posterior tibiæ slightly recurved, and finely spinose on the inner side, all the tarsi 3-jointed; with the basal two joints furnished on the underside with flat coriaceous processes. *Underparts* rufo-testaceous, more or less alutaceous, furnished with very short golden hairs at wide intervals; femora longitudinally strigose.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Two specimens of this curious insect were found by Mr. Champion in a hollow tree, in the nest of a Honey-Bee belonging to the genus *Melipona*.

The present species is certainly distinct from *S. meliponæ*, Girard. It is only half as large, hemispheric in form, and without any trace of longitudinal striæ on the elytra. The elytra are deeply and strigosely asperate, after the manner of *Cyrtusa*; and in colour rufo-castaneous, instead of "pitchy or blue-black" as in *S. meliponæ*.

CREAGROPHORUS, gen. nov.*

Body subhemispheric. *Head* large and broad; clypeus distinctly marked, corneous; antennal grooves very distinct. *Thorax* very short, transverse, deeply excavated in front. *Scutellum* triangular. *Elytra* large, entire, with the epipleural fold very broad. *Wings* ample. *Antennæ* 11-jointed, 1 and 2 large, cylindrical, 3 nearly as long as 2, slender, 4–6 short, nearly equal, 7 very large, 8 very small, patelliform, 9, 10, 11 each larger than 7, 11 obtusely conic; club much incrassated. *Palpi*: *maxillary* moderate, rather slender; 4-jointed, 1 very small, 2 longer and broader than 1, 3 and 4 more than twice as long as 2, nearly equal, 4 slightly incurved, obtusely pointed; *labial* very large, strongly recurved, and furnished at the apex with a very strong and very long seta or setiform process, exceeding in length the entire palpus; 3-jointed, 1 short, pyriform, and recurved, 2 longer than 1, incrassated anteriorly, 3 longer and broader than 1 and 2 united, strongly incurved, and obtusely pointed. *Labrum* very small, coriaceous, strongly rounded on each side, and deeply hollowed in the middle. *Mandibles* short and very broad, very convex at the back, and deeply emarginate at the base, acutely pointed and armed below the point with a very large and very sharp tooth. *Maxillæ* large, bilobed: exterior lobe small and slender, with incurved setæ at the apex; inner lobe very large, fringed for its whole length on the inner side with long incurved setæ; stipes moderate. *Mentum* short, transverse, widest at the base, the sides straight and strengthened with broad costæ; *submentum* similar, but inverse in shape, and strongly constricted near the base. *Labium* short, widest anteriorly, extending between the palpi in a long, slender process with the apex truncate; sides of the labium recurved and acutely pointed below the palpi. *Lingua* short, scarcely visible beyond the labium. *Prosternum* very short, elevated between the coxæ into a very thin carina;

* Κρέαγρα, a hook; φέρω, to bear.

episterna very small, triangular; *epimera* moderate, not enclosing the coxal cavities; coxal cavities very large, open in front and behind. *Mesosternum* large, deeply excavated in front; *episterna* large, humeral; *epimera* moderate, very oblique, extending to the coxal cavities; coxal cavities very large, extending far into the metasternum. *Metasternum* large, not reaching the sides of the body, produced into a small point between the posterior coxæ; *episterna* small and very short; *epimera* long, reaching to the coxæ. All the side-pieces of the mesosternum and metasternum are covered by the very broad epipleural fold of the elytra. *Venter* composed of five segments; the basal segment the longest, and elevated on each side into a long, subtriangular, smooth plate. *Legs*: *anterior* very short; tibiæ slightly dilated towards the apex, armed with a strong apical spur on the inner side, and a smaller one on the outside; tarsi very short, robust, and compressed, 4-jointed, 1, 2, 3 deeply bifid, 4 longer, robust, the claws small and simple; *intermediate* very short and very robust; femora slightly hooked on the inner side of the apex; tibiæ very broad, subtriangular, excavated at the extremity, and produced externally into a broad articulated tooth; tarsi similar to the anterior; *posterior* rather longer; femora long, armed on the inner side at the apex, and sometimes towards the middle also, with long and very strong hooks in the males only; tibiæ moderate, armed with short spurs on each side of the apex; tarsi 3-jointed, longer than the preceding, but similar in form. *Coxæ*: *anterior* very prominent and contingent; *intermediate* not contingent, very large and prominent; *posterior* not contingent, very large.

This genus is allied to *Cyrtusa* and *Isoplastus*; from the latter it differs in its 11-jointed antennæ with their 5-jointed club, and from both in its 4-, 4-, 3-jointed tarsi, anterior coxal cavities open in front and behind, and in having only five ventral segments. It is much more closely allied to *Scotocryptus*, from which it differs only in the normal position of its eyes, its more simply formed 4-, 4-, 3-jointed tarsi, the deeply excised front of the pronotum, and in the anatomy of its mouth. The most striking characters of *Creagrophorus* are the extraordinary dilatation of the intermediate tibiæ and the armature of the posterior femora; both of these characters do, indeed, exist in some other species of 'Anisotomina,' but in none except *Scotocryptus* can be found the curious ventral plates which I have already described; and since these two genera are in many ways so intimately connected with each other, it is not impossible that their life-habits may also be similar.

1. **Creagrophorus hamatus,** sp. n.

Suborbicularis, subcontractilis, piceus, nitidissimus; capite sat magno, subtilissime alutaceo, ore atque clypeo dilutioribus; oculis magnis, sat prominentibus; pronoto parvo et brevi, quam caput latiore vix longiore, ad basin latissimo, subtilissime punctulato, lateribus flavescentibus, valde rotundatis et marginatis, margine basali leviter rotundata angulis obtusis; elytris quam caput atque pronotum latioribus et longioribus, ultra media latissimis, distincte et irregulariter punctatis, interstitiis glabris, nitidis, stria suturali nulla, angulis subhumeralibus obtusis, lateribus valde rotundatis et late marginatis; pedibus longis, robustis, rufo-piceis, intermediorum femoribus hamo valido, acutissimo, intus ad apices armatis; tibiis leviter incurvatis, ad apices valde dilatatis, externe spinosis, atque in dentem permagnum, latum, acutissimum ad apices productis, tibiarum apicibus oblique truncatis; posteriorum femoribus hamo valido, longo, incurvato, acutissimo intus ad apices armatis; tibiis leviter incurvatis, externe spinulosis, et calcari singulo, brevi intus ad apices armatis; tarsis brevibus, robustis; antennis sat parvis, sat brevibus, rufo-piceis, clavis obscuri-oribus. Long. corp. $\frac{14}{16}$–1 lin. = 1·75–2 millim.

Body suborbicular, imperfectly contractile, piceous, very shining. *Head* rather large, microscopically alutaceous, the mouth and the whole of the clypeus pale; eyes large and rather prominent; antennæ rather short and small, rufo-piceous, with club moderate, dusky. *Thorax* short and small, broader but scarcely longer than the head, widest at the base, microscopically punctured; sides flavescent, margined and much rounded; basal margin slightly rounded, with the angles obtuse. *Scutellum* rather large, obtusely triangular;

impunctate. *Elytra* longer and broader than the head and thorax, widest beyond the middle, distinctly and irregularly punctured, with the interstices smooth and shining, without a sutural stria; subhumeral angles obtuse; sides much rounded and broadly margined. *Legs* long and robust, rufo-piceous: *intermediate* with the femora armed at the apex on the inner side with a strong and very sharp incurved hook; the tibiæ slightly incurved and broadly dilated towards the apex, spinose on the outer side, and produced at the apex into a very large, broad, and very sharp tooth, the apex itself obliquely truncate; *posterior* with the femora armed at the apex on the inner side with a long, strong, faintly incurved, and very sharp hook; tibiæ incurved at the base, slightly spinose on the outer side, and furnished on the inner side of the apex with a single short spur; tarsi short, robust, and compressed. *Underparts* ferruginous.

Hab. MEXICO, Puebla (*Sallé*); PANAMA, Volcan de Chiriqui (*Champion*).

This remarkable insect will be known by its almost orbicular form, very shining surface, broadly dilated intermediate tibiæ, and hamate femora of the posterior and intermediate legs. From *C. bihamatus* it is distinguished by its larger size, more rounded form, very distinctly punctured elytra, and paler colour, and also by the shape of the large hook on the posterior femora, which in this species is only faintly incurved towards its extremity.

2. **Creagrophorus bihamatus,** sp. n. (Tab. III. figg. 1 ♂, 6 ♀.)

Obtuse ovatus, rufo-piceus, superficie inæquali, nitida; capite magno, lato, nec distincte punctato, neque alutaceo, sed inæquali, ore atque clypeo rufo-testaceis; oculis magnis, sat prominentibus; pronoto brevi, parvo, quam caput latiore, sed parum breviore, ad basin latissimo, nec distincte punctato, neque alutaceo, sed inæquali, marginibus omnibus rufescentibus, lateribus valde rotundatis et marginatis, margine basali sat rotundata et leviter sinuata angulis rotundatis; elytris semiovatis, postice parum attenuatis, quam caput atque pronotum longioribus haud latioribus, prope media latissimis, vix perspicue punctatis, fere glabris, nitidis, stria suturali sat indistincta ab apicibus usque ad media impressis, lateribus rotundatis et marginatis; pedibus modicis, rufo-piceis, anteriorum tibiis ad apices parum dilatatis, tenuiter spinosis, calcari brevi apicali utrinque armatis; intermediorum femoribus ad apices plus minusve interne hamatis; tibiis externe spinosis, ad apices validissime dilatatis, calcari singulo apicali armatis, externe in dentem validum, latum, aciculatum, productis, posteriorum femoribus in maribus hamo longo, valido, fortiter incurvato, ad apices, atque hamo minore vel dente acuto, ante media intus armatis, in feminis hamis hisce omnibus multo diminutis; tibiis modicis, vix curvatis, externe spinosis, et calcari parvo intus ad apices armatis; tarsis brevibus, robustis et compressis; antennis sat brevibus, rufo-testaceis, clavis sat magnis, obscurioribus. Long. corp. $\frac{12-14}{16}$ lin. = 1·50–1·75 millim.

Body obtusely ovate, rufo-piceous, shining, with the surface uneven. *Head* large and broad, uneven but not distinctly punctate or alutaceous; clypeus and mouth rufo-testaceous; eyes large and rather prominent; antennæ rather short, rufo-testaceous, with the club rather large and dusky. *Thorax* short and small, broader but rather shorter than the head, widest at the base, not distinctly punctate or alutaceous, but uneven, all the margins rufescent; sides much rounded and margined; basal margin slightly rounded and faintly sinuate, with the angles rounded. *Scutellum* rather large, triangular, impunctate. *Elytra* semiovate, slightly narrowed towards the apex, longer but not broader than the head and thorax, widest near the middle, scarcely perceptibly punctured, almost smooth and shining, with an indistinct sutural stria extending from the apex to the middle; sides rounded and margined; apex slightly acuminate. *Legs* moderate, rufo-piceous; *anterior* with the tibiæ slightly dilated towards the apex; finely spinose on the outside, and furnished with a short spur on each side at the apex; *intermediate* with the femora more or less hooked on the inner side of the apex; tibiæ very broadly dilated towards the apex, spinose on the outside and produced at the apex into a large and broad tooth aciculated, or subulated, at its extremity, with a short spur on the inner side; *posterior* with the femora armed on the inner side of the apex in the male with a long, strongly incurved, and very sharp hook, and towards the middle with a shorter hook or sharp tooth,

all these hooks being more or less rudimentary in the female; tibiæ moderate, scarcely incurved, spinose on the outside, and furnished with a short spur on the inner side of the apex; tarsi short, robust, and compressed. *Underparts* rufo-testaceous.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This species differs from the preceding in its smaller size, more ovate and less convex form of its body, uneven surface of the head and thorax, almost impunctate elytra, and doubly-hooked posterior femora. The last-mentioned character is nevertheless variable, and in some examples, especially those which I suppose to be females, evanescent; but in all the four specimens now before me this armature is more or less apparent.

CYRTUSA.

Cyrtusa, Erichson, Naturg. Ins. Deutschl. iii. p. 77 (1845).

Body more or less hemispheric, not contractile. *Head* rather large, with antennal grooves beneath. *Thorax* transverse, widest at the base. *Elytra* large, entire. *Antennæ* generally short, 11-jointed, 8 often very minute, 7–11 forming a rather abruptly incrassated club. *Prosternum* small, produced and dilated behind the coxal cavities; *episterna* small; *epimera* rather large, partly enclosing the coxal cavities; coxal cavities large, enclosed behind. *Mesosternum* rather large, deeply excised in front; *episterna* long and narrow, humeral; *epimera* long and very narrow, reaching to the coxal cavities; coxal cavities long and large, not contingent. *Metasternum* short, not extending to the sides of the body, slightly produced between the coxæ; *episterna* rather small, not reaching the coxæ; *epimera* long and narrow, extending to the coxæ. *Venter* composed of six segments, 1–5 nearly equal, 6 very small. *Legs* generally short and robust; intermediate and posterior tibiæ spinose, often much dilated; posterior femora often incrassated and truncate at the apex; tarsi 5-, 5-, 4-jointed.

Eight species of this genus have been described, all from Europe or North America. One species, apparently identical with the North-American *C. blandissima*, inhabits Guatemala.

1. **Cyrtusa blandissima.** (Tab III. fig. 5.)

Cyrtusa blandissima (Zimm.), Horn, Trans. Am. Ent. Soc. viii. p. 294, t. 7. figg. 8, 8 *a* [1].

Obtuse ovata, validissime convexa, rufo-castanea, nitidissima; capite sat magno, distincte punctato, ore prominente; oculis magnis, valde prominentibus; pronoto quam caput longiore et multo latiore et magis leviter punctato, interstitiis glabris, prope medium latissimo, lateribus marginatis, antice valde rotundatis, margine basali leviter sinuata angulis obtusis; elytris semiovalibus, quam caput atque pronotum parum longioribus, haud latioribus, ad humeros latissimis, striis octo punctorum impressis, interstitiis minute et remote punctatis, lateribus late marginatis, apice valde obtuso; pedidus valde robustis, tibiis dilatatis et spinosis, calcaribus robustis ad apices armatis, tibiis intermediis curvatis, tarsis 5-, 5-, 4-articulatis, articulis basalibus parum dilatatis; antennis 11-articulatis, articulis 7, 9, 10, 11 clavam formantibus, octavo exiguo, patelliformi. Long. corp. $\frac{15}{16}$ lin.=1·87 millim.

Body obtusely ovate, exceedingly convex, rufo-castaneous, very shining. *Head* rather large, distinctly punctured; mouth prominent; eyes large and very prominent; antennæ moderate, 11-jointed, the funiculus rather slender, joints 7, 9, 10, 11 forming a much incrassated club, 8, very small, patelliform, the club dusky. *Thorax* rather longer, much broader, and more lightly punctured than the head, with the interstices smooth, widest near the middle; sides margined and much rounded anteriorly; basal margin slightly sinuated, with the angles obtuse. *Scutellum* large, triangular. moderately punctured. *Elytra* semioval,

rather longer but not broader than the head and thorax, widest at the shoulders, with eight rows of punctures, and the interstices minutely and remotely punctured; sides broadly margined; apex very obtuse. *Legs* very robust; tibiæ dilated and spinose, armed with strong apical spurs, the intermediate pair slightly incurved; tarsi 5-, 5-, 4-jointed, with the basal joints slightly dilated. *Underparts* rufo-castaneous.

Hab. North America, North Carolina and district of Columbia[1].—Guatemala, Cerro Zunil (*Champion*). One specimen.

COLENIS.

Colenis, Erichson, Naturg. Ins. Deutschl. iii. p. 82 (1845).

Body generally ovate, not contractile. *Head* rather large, without antennal grooves beneath. *Thorax* rather small, transverse, generally widest at the base. *Elytra* rather large, entire. *Antennæ* rather short, 11-jointed, with the eighth joint nearly as large as the seventh; joints 9–11 forming a moderately incrassated club. *Palpi* with the basal joints of all robust, and the apical joint cylindrical and obtuse. *Prosternum* very small; *episterna* indistinct; *epimera* small, not enclosing the coxal cavities; coxal cavities large, contingent, open in front and behind. *Mesosternum* moderate, carinated; *episterna* rather large, humeral; *epimera* long and very narrow, extending to the coxal cavities; coxal cavities large, oblong, moderately distant. *Metasternum* very short, not extending to the sides of the body; *episterna* short and narrow; *epimera* large, extending beyond the coxæ; coxæ not contingent. *Venter* composed of five segments. *Legs* moderate; tibiæ spinose; tarsi 5-, 4-, 4-jointed.

Five species of this genus have been described—four from Europe and one from North America. *Colenis* is now known to extend as far south as the State of Panama; two species are here enumerated.

1. **Colenis punctulata,** sp. n.

Ovalis, valde convexa, nitida, piceo-castanea; capite sat lato, minute punctato, interstitiis alutaceis, ore flavo; oculis modicis, sat prominentibus; pronoto quam caput longiore et multo latiore, ad basin latissimo, minute et confertim punctato, interstitiis alutaceis, superficie transverse undulata, lateribus marginatis et leviter rotundatis, margine basali leviter rotundata angulis obtusis, marginibus omnibus dilutioribus; elytris semiovalibus, prope humeros latissimis, quam caput atque pronotum longioribus, haud latioribus, transverse strigosis, punctis distinctis striatim dispositis atque stria suturali ab apice usque ad media extensa impressis, lateribus marginatis, apice valde obtuso; pedibus modicis, flavis, tibiis haud spinosis, tarsis sat robustis, 5-, 4-, 4-articulatis; antennis sat longis, flavescentibus, clavis elongatis, obscuris. Long. corp. $\frac{10}{16}$ lin.=1·25 millim.

Body oval, very convex, shining, pitchy-castaneous. *Head* rather broad, minutely punctate, with the interstices alutaceous; mouth yellow; eyes moderate, rather prominent; antennæ rather long, flavescent, with the club elongate and dusky. *Thorax* longer and much broader than the head, widest at the base, minutely and closely punctured, with the interstices alutaceous; surface transversely undulated; sides margined and slightly rounded; basal margin slightly rounded, with the angles obtuse; all the margins more or less flavescent. *Scutellum* rather broad, triangular and impunctate. *Elytra* semioval, widest near the shoulders, longer but not broader than the head and thorax, transversely strigose, marked with distinct punctures disposed in striæ, and an impressed sutural stria extending from the apex to the middle; sides margined; apex very obtuse. *Legs* moderate, yellow; tibiæ not spinose; tarsi rather robust, 5-, 4-, 4-jointed. *Underparts* testaceous.

Hab. Panama, Bugaba (*Champion*). One specimen.

This insect differs from Dr. Horn's description and figure of *C. impunctata* (Trans.

Am. Ent. Soc. viii. p. 293, t. 6. f. 23) in the punctured surface of its whole body, and in the larger size of the seventh joint of its antennæ.

2. **Colenis crassicornis,** sp. n.

Ovalis, valde convexa, nitida, castanea; capite modico, levissime transverse strigoso; ore atque clypeo flavis; oculis sat magnis, sat prominentibus; pronoto quam caput sat longiore, multo latiore, prope basin latissimo, levissime transverse strigoso, impressionibus duabus foveolatis prope basin, inter sese atque latera pronoti equidistantibus, atque etiam punctis remotis indistinctis in disco impresso, lateribus marginatis et leviter rotundatis, margine basali fere recta angulis obtusis; elytris semiovalibus, quam caput atque pronotum multo longioribus, haud latioribus, prope humeros latissimis, sat profunde transverse strigosis, punctis distinctis irregulariter striatim dispositis, atque stria suturali profunda ab apice fere ad scutellum extensa impressis, lateribus marginatis et leviter rotundatis, apice obtuso; pedibus robustis, rufo-testaceis, tibiis plus minusve dilatatis, intermediis externe spinosis, tarsis robustis, 5-, 4-, 4-articulatis; antennis brevibus, robustis, rufo-testaceis, clavis valde incrassatis. Long. corp. $\frac{10}{16}$ lin. = 1·25 millim.

Body oval, very convex, shining, castaneous. *Head* moderate, very faintly transversely strigose; mouth and entire clypeus yellow; eyes rather large and rather prominent; antennæ short and robust, rufo-testaceous, with the club much incrassated. *Thorax* rather longer and much broader than the head, widest near the base, very faintly transversely strigose, with two foveolate impressions near the base equidistant from each other and from the sides, and minute remote punctures on the disc; sides margined and faintly rounded; basal margin almost straight, with the angles obtuse. *Scutellum* moderate, triangular, and smooth. *Elytra* semioval, much longer but not broader than the head and thorax, widest near the shoulders, deeply transversely strigose, with distinct punctures irregularly disposed in longitudinal striæ, and a deep sutural stria extending from the apex nearly to the scutellum; sides margined and slightly rounded; apex obtuse. *Legs* robust, rufo-testaceous; tibiæ more or less dilated, the intermediate pair spinose on the outer side; tarsi robust, 5-, 4-, 4-jointed. *Underparts* rufo-testaceous.

Hab. GUATEMALA, Capetillo (*Champion*). One example.

Differs from *C. punctulata* in its narrower form, fainter and diverse sculpture of its head and thorax, more deeply strigose elytra with a long and deep sutural stria, shorter and much more robust antennæ, and in its paler colour.

ANISOTOMA.

Anisotoma, Illiger, Kugel. Verz. Käf. Preuss. p. 69 (1798).

Body more or less ovate, not contractile, very convex. *Head* rather large, without antennal grooves beneath. *Thorax* generally large, and widest towards the base. *Elytra* entire. *Antennæ* 11-jointed, sometimes short; club 5-jointed, with the eighth joint much smaller than the seventh. *Palpi* sometimes rather long, with the terminal joint in all cylindrical and obtusely pointed. *Prosternum* short; *episterna* very small; *epimera* very small, almost rudimentary; coxal cavities very large, pyriform, with a large foramen at the outer extremities, contingent, partly closed behind by the inflexed portion of the pronotum. *Mesosternum* large, anteriorly produced into a point; *episterna* very large, each nearly equal to the sternum; *epimera* moderate, extending to the coxal cavities; coxal cavities very large, pyriform, contingent. *Metasternum* rather short, not extending to the sides of the body; *episterna* rather small, not reaching to the coxæ; *epimera* narrow, reaching to the coxæ; coxæ very large, almost contingent. *Venter* composed of six segments. *Legs* moderate, sometimes long; tibiæ generally spinose; tarsi moderate, 5-, 5-, 4-jointed.

This genus contains a large number of described species, the majority of which

inhabit Europe and temperate North America. One species has been found at a high altitude in Guatemala.

1. **Anisotoma podagrica,** sp. n. (Tab. III. fig. 7, ♂.)

Late ovata, validissime convexa, piceo-castanea, nitida; capite sat parvo, modice et distincte punctato, interstitiis glabris, ore rufo, mandibulis prominentibus, nigro terminatis; oculis modicis, haud prominentibus; pronoto sat brevi, quam caput parum longiore, multo latiore, ad basin latissimo, distincte sed modice punctato, interstitiis glabris, lateribus marginatis, antice valde rotundatis, margine basali leviter sinuata angulis obtusis; elytris semiovatis, quam caput atque pronotum vix latioribus plus quam sesqui-longioribus, pone humeros latissimis, postice parum attenuatis, punctorum striis octo integris impressis, interstitiis leviter sed distincte punctatis, lateribus marginatis; pedibus robustis, tibiis ad apices dilatatis, fortiter spinosis, quatuor posterioribus calcaribus longis robustis armatis, tarsis 5-, 5-, 4-articulatis, posterioribus valde incrassatis; antennis sat brevibus, rufis, clavis piceis. Long. corp. $1\frac{9}{16}$ lin.=3·12 millim.

Body broadly ovate, exceedingly convex, pitchy-castaneous, shining. *Head* rather small, somewhat strongly and distinctly punctured, with the interstices smooth; mouth rufous, with the mandibles prominent, tipped with black; eyes moderate, not prominent; antennæ rather short, rufous, with the club piceous. *Thorax* rather short, a little longer and much broader than the head, widest at the base, distinctly but moderately punctured, with the interstices smooth; sides margined and much rounded anteriorly; basal margin faintly sinuated, with the angles obtuse. *Scutellum* large, triangular, distinctly punctured. *Elytra* semiovate, scarcely broader but more than one half longer than the head and thorax, widest behind the shoulders, slightly attenuated posteriorly; marked with eight perfect rows of punctures on each elytron, with the interstices broad, lightly but distinctly punctured; sides margined. *Legs* robust; tibiæ dilated towards the apex and strongly spinose, with a long and very strong spur on the inner side of the intermediate and posterior pairs; tarsi 5-, 5-, 4-jointed, the posterior pair very much incrassated; posterior femora strongly laminated on the hinder side, terminating at the apical extremity in a strong curved hook. *Underparts* castaneous.

Hab. GUATEMALA, Totonicapam 10,500 feet (*Champion*).

One example, found in moss in a pine-wood.

DIETTA.

Dietta, Sharp, Ent. Monthly Mag. xiii. p. 78 (1876).

Body rather elongate; head and thorax narrow; elytra inflated; beneath very convex, with the sides flattened. *Head* very prominent, contracted posteriorly; frontal plate reflexed at the margin; clypeus distinct, deeply emarginate, furnished with four strong setæ. *Thorax* more or less oval, with the front margin entire, and the base incumbent on the elytra. *Scutellum* triangular. *Elytra* entire, inflated, posteriorly very obtuse. *Antennæ* inserted beneath the frontal plate, 11-jointed, 1 much longer than 2, 2–6 gradually shorter, 7 very large, cyathiform, 8 very small, 9 very large, cyathiform, 10 cyathiform but smaller, 11 obtusely conic, 1–6 furnished with short setæ; joints 7, 9, 10, 11 pubescent, forming a much incrassated and remotely articulated club. *Palpi*: *maxillary* long and slender, 4-jointed, the basal joint very small, the remainder nearly equal in length and breadth, the apical joint pointed; *labial* long and slender, 3-jointed, the basal joint very small, 2 and 3 equal in length and breadth, the apical joint pointed. *Labrum* small and very prominent, deeply bifid in front, with the extremities rounded; sides and extremities broadly membranaceous and translucent, and furnished with a broad membranaceous appendage in front. *Mandibles* very large and strongly hooked, armed with several small teeth near the base. *Maxillæ* bilobed: exterior lobe very small, slender, and incurved, furnished at the apex with short setæ; inner lobe very large, fringed on the inner edge with very long setæ. *Mentum* large and corneous, very broad at the base, and narrowed anteriorly; *submentum* of the same

shape inversed. *Labium* coriaceous, elongate, narrow, constricted at the middle, anteriorly deeply bifid, with the extremities truncate. *Lingua* membranaceous, broadly bifid anteriorly. *Prosternum* rather small, carinated, with the carina produced behind the coxæ into a subtriangular point depressed in the middle; *episterna* small and very narrow; *epimera* moderate, enclosing the coxal cavities behind; coxal cavities pyriform, with a trochantin at the outer extremities. *Mesosternum* rather large, very deeply excavated in front, with four oval impressions on the margin of the excavation; *episterna* humeral, very large; *epimera* rather large, extending to the coxal cavities; coxal cavities very oblique, pyriform, extending far into the metasternum, with a trochantin at the outer extremity. *Metasternum* very short, not extending to the sides, produced posteriorly into a point between the coxæ; *episterna* rather short; *epimera* extending beyond the episterna as far as the coxæ; coxæ very large and broad, not extending to the sides of the body. *Venter* composed of six segments, with the basal segment the longest, and the apical one very small. *Legs* rather long and slender, the intermediate pair the longest: *anterior* shorter than the others; tibiæ dilated towards the apex, and armed with two long spurs at the inner angle; tarsi long, 5-jointed, 1 very small, 2–4 equal, the claws long, obtusely dentate at the base; *intermediate* femora very long; tibiæ slightly incurved, dilated towards the apex, densely setose, armed with spines on the outer side and two long, incurved, aciculated apical spurs on the inner side; tarsi similar to the anterior; *posterior* femora obtusely dentate on the inner side of the apex; tibiæ rather long, densely setose, armed with several long spurs at the apex; tarsi like the foregoing. *Coxæ*: *anterior* small, prominent, obliquely pyriform, nearly contingent; *intermediate* widely separated, prominent, pyriform, very oblique; *posterior* contingent, very large, and very broad, nearly extending to the sides of the body.

Dietta is the most abnormal of all the "Anisotomina"; in the shape of its head and thorax it bears much resemblance to the Staphylinidæ, while the unusual development of its pectoral region and the position and shape of the intermediate coxal cavities reminds one of the *Necrophori*. Its proper position in the Anisotomina, to which it undoubtedly belongs, appears to be at the end of the tribe, leading to the true "Silphina."

Dr. Sharp has described the anterior tarsus of *Dietta* as possessing but four joints, while in the present example there are evidently five; but I do not think this a matter of much importance, because the basal joint is so small and is so completely concealed by the spurs of the tibia that it is undiscernible without dissection; and moreover, since throughout the whole tribe the number of the tarsal joints is subject to such endless variation in the sexes as well as the species, the difference, if it should exist, may possibly be merely sexual.

This genus has hitherto contained but a single species from N.W. Australia; a second from the State of Panama is now added.

1. **Dietta sharpi,** sp. n. (Tab. III. fig. 8.)

Forsan subcontractilis, elongata, capite atque pronoto angustioribus, elytris sat inflatis, rufa, nitidissima; capite valde prominente, magno, lato, convexo, remote punctato; oculis permagnis, valde prominentibus; ore magno, prominente, labro setoso, profunde emarginato; pronoto obcordato, quam caput longiore, vix latiore, ante medium latissimo, valde convexo, glabro, nitidissimo, lateribus marginatis et rotundatis, margine basali leviter rotundata basi elytrorum incumbente, angulis rotundatis; elytris quam caput atque pronotum brevioribus, sed multo latioribus, prope media latissimis, sat inflatis, profunde punctato-striatis, interstitiis glabris, nitidis, valde elevatis, humeris externe abrupte elevatis et lævigatis, atque lateraliter angulatis, seta longa flava, erecta ad humeros, atque setis nonnullis minoribus ad latera instructis, stria suturali profunda impressis, lateribus sat late marginatis, angulis subhumeralibus obsoletis; pedibus longis sat robustis, rufis,

tibiis sat dense setosis, atque externe fortiter spinosis, calcaribus binis, longis, robustis, leviter incurvatis, intus armatis; tarsis longis, sat gracilibus, omnibus 5-articulatis, articulo basali brevi, parvo; antennis longis, robustis, rufis, clavis elongatis, valde incrassatis, obscurioribus. Long. corp. $1\frac{12}{16}$ lin.=3 millim.

Body probably subcontractile, elongate, with the head and thorax rather narrow and the elytra inflated; rufous, very shining. *Head* very prominent, large and broad, convex; mouth large and prominent, with the labrum setose and deeply emarginate; eyes very large and very prominent; antennæ long and robust, rufous, with the club elongate, much incrassated, and dusky. *Thorax* obcordate, longer but scarcely broader than the head, widest before the middle, very convex, smooth, and very shining; sides margined and rounded; basal margin slightly rounded and overlapping the shoulders of the elytra; basal angles rounded. *Scutellum* small, triangular, pale. *Elytra* shorter but much broader than the head and thorax, widest near the middle, somewhat inflated, deeply punctate-striate, with the interstices much elevated, smooth, and shining, the shoulders abruptly elevated and polished, and slightly angulated at the outer side; furnished with a long yellow erect seta below the shoulders and several shorter setæ on the sides; sutural stria deeply impressed; sides rather broadly margined, with the subhumeral angles obsolete. *Legs* long and rather robust, rufous; tibiæ densely setose and strongly spinose on the outer side, armed with two long, strong, and slightly incurved spurs on the inner side of the apex; tarsi long and rather slender, all 5-jointed, with the basal joint short and small. *Underparts* rufous, setose; mesosternum very deeply punctured; metasternum ornamented with deep punctures arranged in a medial line, with a semicircular row at its anterior extremity, the sides densely clothed with silvery hair.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One specimen only: this was captured on the wing in the dense forest.

I have separated this species from *D. sperata*, Sharp, on account of their great disparity in size (*D. sperata* being twice as large as the present specimen); and from some discrepancies in their respective descriptions—such as the sculpture of the thorax and scutellum, and the comparative size of the eighth joint of the antennæ, which in this species is very distinctly evident, although Dr. Sharp merely suggests its possible existence.

SILPHINA.

NECROPHORUS.

Necrophorus, Fabricius, Syst. Ent. p. 71 (1775).

Body elongate; abdomen much exposed. *Head* rather small, much narrowed in front; epistoma corneous. *Thorax* small, the pronotum often deeply sculptured. *Elytra* truncate; epipleural folds very broad. *Abdomen* much exposed, often clothed with hair. *Antennæ* very short, 10-jointed, geniculate, and abruptly capitate. *Palpi* small; apical joint of all cylindrical and obtusely pointed. *Lingua* small, not broader than the labium, deeply hollowed in front. *Maxillæ* bilobed; inner lobe not hooked as in *Silpha*, but in other respects similar. *Prosternum* very short; *episterna* and *epimera* rudimentary; coxal cavities very large, contingent, open behind, with a large trochantin. *Mesosternum* very small; *episterna* very large, each being larger than the sternum; *epimera* long and large, reaching to the coxal cavities; coxal cavities distant, large, and very oblique. *Metasternum* rather large, slightly mucronated between the posterior coxæ, extending to the sides of the body; *episterna* long and rather broad, reaching to the coxæ; *epimera* rather large, much dilated towards the apex, and extending beyond the coxæ; coxæ contingent. *Venter* composed of six segments. *Legs* large; tibiæ strongly spinose; tarsi long, 5-jointed, the anterior pair dilated in the male.

This well-known genus is numerously represented in the Palæarctic and Nearctic

regions; one species has been described from Bolivia. Five species inhabit Central America.

1. **Necrophorus mexicanus,** sp. n.

Necrophorus mexicanus, Chevr. in litt.

Sat latus, sat convexus, haud pubescens, sat nitidus, impressionibus solitis omnibus profundissimis, niger, fasciis atque epipleuris elytrorum aut late rufis, aut aurantiacis, his macula nigra antice notatis; capite modico, fere impunctato, glabro, nitido, epistomate antice læte flavo, vel rufo, postice nigro; oculis permagnis, valde prominentibus; pronoto subquadrato, antice latissimo, parum latiore quam longo, disco minute et indistincte punctato, lateribus atque basi valde depressis et profunde punctatis, impressionibus omnibus valde profundis, lateribus sinuatis et marginatis, basi sinuata, levissime rotundata; elytris magnis, quam pronotum multo latioribus et plus quam duplo longioribus, ad extrema latissimis, postice convexis, minutissime punctatis, ordine suturali et tribus aliis equidistantibus punctorum majorum elytro utroque notatis, fasciis solitis vel rufis vel læte flavis, plerumque angustis, posterioribus ab apicibus remotis, epipleuris flavis vel rufis, macula nigra antice notatis, extremis marginatis et sinuatis; abdomine nigro, pilis nigris sat dense vestito, segmentis omnibus pilis validis erectis fimbriatis; pedibus magnis, robustis, tibiis posterioribus rectis, dilatatis; antennis gracilibus, nigris, clavis rufescentibus articulo primo nigro. Long. ad extr. elytrorum 6–10 lin.=12–20 millim. Lat. elytrorum 3–4½ lin.=6–9 millim.

Body rather broad and convex, not pubescent, rather shining, with the usual impressions very deep; black, with the fasciæ and epipleural folds of the elytra either red or orange, the latter marked with a black spot near the shoulder. *Head* moderate, almost impunctate, smooth and shining; epistoma black at the base and red or yellow in front; eyes very large and prominent; antennæ slender, black, club rufescent, with the first joint black. *Thorax* subquadrate, rather widest in front, very little broader than long; disc very shining, minutely and indistinctly punctured; sides and base much depressed and more deeply punctured, all the impressions very deep, the sides sinuated and margined, the base sinuated and very slightly rounded. *Scutellum* very large, obtusely pointed, rather deeply punctured, with an impressed longitudinal line. *Elytra* large, much broader and more than twice longer than the thorax, widest at the extremities, convex posteriorly, very minutely punctured, with a sutural and three equidistant rows of larger shallower punctures on each, the usual fasciæ variable in breadth, generally narrow, either red or bright orange, the posterior fascia not extending to the extremities; epipleural folds red or orange, with a black spot near the shoulder; apical extremities sinuated and margined. *Abdomen* rather pointed, minutely punctured, clothed with black hair, the edge of the penultimate segment white; each segment fringed with long erect black hairs. *Legs* robust; posterior tibiæ straight, and dilated towards the apex. *Underparts* black, minutely and closely punctured, covered with black hair, each ventral segment furnished with a fringe of erect black hairs.

Hab. Mexico, Ciudad in Durango (*Forrer*), Yolotepec, Parada (*Sallé*), Mexico city (*Höge*).

Differs from any of the following species in its larger size, subquadrate and deeply sculptured thorax, narrow fasciæ, and spotted epipleural folds of the elytra, and erectly fringed segments of the abdomen.

This fine species is allied to the European *N. ruspator* and *N. interruptus*, but differs from them both in the remote and much finer punctuation of the whole body and in the smaller size of its thorax. It is subject to great variation in size, and in the colour of the fasciæ and epipleural folds of the elytra—some examples being little more than half the size of others, and some having red, and others orange-coloured markings.

2. **Necrophorus montezumæ,** sp. n.

Sat angustus, modice convexus, nitidissimus, haud pubescens, impressionibus solitis levissimis, fere obsoletis, niger, elytrorum fasciis atque epipleuris rufis; capite sat longo, modice punctato, epistomate læte rufo; oculis modicis, prominentibus; pronoto sat parvo, subcordiformi, vix latiore quam longo, antice latissimo, valde convexo, nitido, impressionibus omnibus levissimis, lateribus atque basi marginatis, valde depressis, et sat profunde punctatis, basi valde rotundata; elytris sat longis, quam pronotum multum latioribus, duplo longioribus, ad extrema latissimis, modice et remote punctatis, lineis tribus elevatis, indistinctis, longitudinalibus, atque ordine punctorum majorum ad lineam mediam notatis, fascia subhumerali lata, ad suturam extensa, postice profunde angulata, fascia apicali angusta, nec ad suturam, neque ad extrema elytrorum extensa, fasciis atque epipleuris rufis, extremis marginatis et leviter bisinuatis; abdomine nigro, modice punctato; pedibus sat longis, robustis, tibiis posterioribus dilatatis, leviter incurvatis; antennis sat brevibus, nigris, clavis læte rufis. Long. ad extr. elytrorum 7–7½ lin. = 14–15 millim. Lat. elytrorum 3½–4 lin. = 7–8 millim.

Body rather narrow, moderately convex, very shining, not pubescent, all the usual impressions very faint, almost obliterated; black, with the fasciæ and epipleural folds of the elytra red. *Head* rather long, moderately punctured, the epistoma bright red; eyes moderate, prominent; antennæ rather short, black, with the club bright red. *Thorax* rather small, subcordiform, scarcely broader than long, widest in front, very convex and shining, with all the impressions very faint, almost obliterated; sides and base margined, very much depressed and deeply punctured, the base much rounded. *Scutellum* large and long, obtusely pointed, and deeply punctured. *Elytra* rather long, much broader and twice longer than the thorax, widest at the extremities, moderately and distantly punctured, indistinctly marked with three elevated longitudinal lines, with a row of larger punctures near the middle line; subhumeral fascia broad and deeply angulated at the hinder margin, reaching to the suture; apical fascia narrow, not reaching the suture or the extremities of the elytra; fasciæ and epipleural folds red; extremities margined and faintly bisinuated. *Abdomen* black, long, and shining, moderately punctured, with all the segments except the apical deeply margined. *Legs* rather long and robust; posterior tibiæ considerably dilated and slightly incurved. *Underparts* black, finely punctured, and very shining, the breast covered with golden hair.

Hab. Mexico, Villa Lerdo in Durango, Cholula, Jalapa, Mexico city, Esperanza (*Höge*).

This appears to be a very distinct species, and may be distinguished by its narrow and rather elongate form, small thorax, much widest in front, with all the usual impressions very faintly marked, the deeply angulated posterior margin of the subhumeral fascia, and the wholly red club of the antennæ.

3. **Necrophorus olidus,** sp. n.

Necrophorus olidus, Chevr. in litt. (teste Sallé).

Depressus, pube brevi aurea vestitus, impressionibus solitis valde profundis, niger, fasciis subhumeralibus latissimis, atque apicalibus rufis, epipleuris totis rufis; capite modico, vertice convexo, nitidissimo, minute punctato, epistomate nigro-piceo; oculis modicis, prominentibus; pronoto parvo, rotundato, vix latiore quam longo, prope medium latissimo, linea mediali atque impressionibus omnibus profundis, disco glabro, fere impunctato, ad margines omnes profundius punctato, lateribus una cum basi rotundatis, depressis, et late marginatis; elytris quam pronotum multum latioribus et duplo longioribus, ad extrema latissimis, confertim et sat profunde punctatis, fasciis subhumeralibus latis, apicalibus angustis, rufis, ad suturam extensis, epipleuris rufis, extremis bisinuatis, angulis suturalibus productis, nigris; abdomine sat profunde punctato, pilis nigris densius vestito; pedibus sat longis, nigris, tibiis intermediis leviter incurvatis; antennis sat brevibus, nigris, clavis rufis articulis basalibus nigris. Long. ad extr. elytrorum 7–8 lin. = 14–16 millim. Lat. elytrorum 3–3½ lin. = 6–7 millim.

Body depressed, clothed with short golden pubescence, all the impressions very deep; black, with the broad subhumeral, and narrow apical fasciæ, and the epipleural folds, red. *Head* moderate, with the vertex elevated, very shining, and minutely punctured, the epistoma pitchy-black; eyes moderate, prominent; antennæ

rather short, black, the club red, with the basal joint black; neck rather deeply punctured. *Thorax* small, rounded, scarcely broader than long, widest near the middle, the medial line and all the impressions very deep, the disc almost impunctate, and very shining; front, sides, and base depressed, and more deeply punctured, the sides and base continuously rounded and deeply margined. *Scutellum* triangular, obtusely pointed, and closely punctured. *Elytra* twice longer and much broader than the thorax, widest at the extremities, rather deeply and very closely punctured; subhumeral fascia very broad, the apical fascia rather narrow, both reaching the suture, the epipleural fold and fasciæ red; the extremities bisinuated, with the sutural angles produced and black. *Abdomen* rather deeply punctured, and clothed with black hair. *Legs* rather long, with the intermediate tibiæ slightly incurved. *Underparts* black, rather closely punctured, the breast not pubescent.

Hab. MEXICO, Cordova, Tuxtla, Juquila (*Sallé*), Zapotlan in Colima (*Höge*).

Differs from the other allied species in its small rounded and deeply sculptured thorax, piceous epistoma, closely-punctured elytra, and breast devoid of pubescence.

4. **Necrophorus marginatus.**

Necrophorus marginatus, Fabr. Syst. Eleuth. i. p. 334; Lec. Proc. Ac. Phil. 1853, p. 275 [1]; Horn, Trans. Am. Ent. Soc. viii. p. 231 [2].

Depressus, nitidus, impressionibus solitis sat levibus, niger, fasciis rufis elytrorum ambabus latis et ad suturam extensis, epipleuris totis rufis; capite modico, distincte punctato, epistomate rufo; oculis magnis, prominentibus; pronoto subcordato, longiore quam lato, antice latissimo, ad medium contracto, basi rotundata, una cum lateribus marginata et depressa, margine confertim punctata, disco nitidissimo, remote et minute punctato, interstitiis minutissime punctatis, linea mediali atque impressionibus omnibus leviter impressis; elytris quam pronotum sesqui-longioribus, parum latioribus, ad extrema latissimis, modice punctatis, fasciis duabus rufis, latissimis, ad suturam extensis notatis, epipleuris totis rufis; abdomine sat profunde punctato; pedibus sat brevibus, robustis, nigris, tibiis posterioribus rectis; antennis nigris, clavis totis rufis. Long. ad extr. elytrorum 7 lin.=14 millim. Lat. elytrorum $3\frac{1}{2}$ lin.=7 millim.

Body depressed, shining, with the usual impressions faintly marked; black, with the fasciæ of the elytra red, very broad, and reaching to the suture, the epipleural folds red. *Head* moderate, distinctly punctured, the epistoma rufous; eyes large, very prominent; antennæ black, with the whole club red. *Thorax* subcordate, longer than broad, widest in front, contracted near the middle; basal margin rounded; sides and base depressed and margined, the margin closely punctured; disc very shining, minutely and remotely punctured, with the interstices more minutely punctured, the medial line and all the impressions rather shallow. *Scutellum* large, triangular, and deeply punctured. *Elytra* one half longer, and rather broader than the thorax, widest at the extremities, moderately punctured, with two indistinctly elevated costæ on the disc; with very broad subhumeral and apical red fasciæ, both reaching to the suture, the epipleural folds entirely red; extremities bisinuated, with the sutural angles acute. *Abdomen* rather deeply punctured, not pubescent. *Legs* rather short, robust; posterior tibiæ straight. *Underparts* black, rather deeply punctured, the breast covered with golden hair.

Hab. NORTH AMERICA [2], New York, Georgia, Nebraska, Texas, and California [1].—MEXICO, Parras in Coahuila (*Dr. Palmer*).

So far as it is possible to judge from the two Mexican examples before me, this species appears to be distinguished from its congeners by its depressed form, faint sculpture and general shape of the thorax, the broad fasciæ of the elytra, and wholly red club of the antennæ.

5. **Necrophorus quadrimaculatus,** sp. n.

Sat angustus, nitidissimus, impressionibus solitis omnibus profundis, aterrimus, maculis humeralibus atque

apicalibus elytrorum læte flavo-rufis; capite modico, minute et indistincte punctato, epistomate nigro-piceo; oculis magnis, valde prominentibus; pronoto sat parvo, haud latiore quam longo, prope medium latissimo, lateribus una cum basi rotundatis et fortiter depressis, linea mediali atque impressionibus omnibus valde profundis, ad latera atque basin modice punctato, disco nitidissimo, fere glabro; elytris quam pronotum multum latioribus et duplo longioribus, ad extrema latissimis, sat profunde et distincte punctatis, interstitiis glabris, nitidis, sutura parum elevata, macula, sive fascia abbreviata, ad basin antice producta, prope humeros, atque alia rotundata ad angulum apicalem exteriorem, omnibus læte flavo-rufis, notatis, epipleuris latis, nigris, apicibus truncatis sinuatis; abdomine sat longo, acuminato, pilis nigris vestito, sat profunde punctato; pedibus sat longis, nigris; antennis nigris, clavis rufis articulo basali nigro. Long. ad extr. elytrorum $5\frac{1}{2}$–7 lin.=11–14 millim. Lat. elytrorum $2\frac{1}{2}$–3 lin.=5–6 millim.

Body rather narrow, very shining, with all the usual impressions very deeply marked; deep black, with apical and subhumeral bright orange spots on the elytra. *Head* moderate, minutely and indistinctly punctured, the epistoma pitchy-black; eyes large and very prominent; antennæ black, the club bright red with the basal joint black. *Thorax* rather small, not broader than long, widest at the middle, the sides and base much depressed and continuously rounded, the medial line and all the impressions very deep; sides and base moderately punctured, the disc nearly smooth and very shining. *Scutellum* large, obtuse, rather deeply punctured. *Elytra* twice longer, and much broader than the thorax, widest at the extremities, rather deeply and distinctly punctured, with the interstices smooth and shining, the suture rather elevated; with a subhumeral bright orange spot or abbreviated fascia, produced in a narrow line towards the shoulder, and a rounded bright orange spot near the exterior apical angle, not extending to the apex; epipleural fold broad and entirely black; apex truncate and rather deeply bisinuated. *Abdomen* rather long and pointed, clothed with black hair, rather deeply punctured, with a deep impression on each side of the base of the penultimate segment. *Legs* rather long, black, with the intermediate and posterior tibiæ faintly incurved. *Underparts* black and shining.

Hab. GUATEMALA, San Gerónimo, Cerro Zunil (*Champion*).

This very distinct species may be known by its rounded thorax and smoother surface, and by the small size of the orange-coloured markings of the elytra, which are mere spots and not fasciæ as in most of the other members of the genus. In shape *N. quadri-maculatus* resembles the European *N. mortuorum*, but differs from that species in the characters already mentioned, and also in the red club of its antennæ, and in the black epipleural folds of its elytra.

SILPHA.

Silpha, Linnæus, Syst. Nat. ii. p. 569 (1758).

Body oblong or elongate; often much depressed. *Head* small and often elongate. *Thorax* generally large and broad. *Elytra* usually more or less truncate, often deeply sinuated at the extremities. *Abdomen* often elongate and much exposed. *Antennæ* 11-jointed, often long and slender, with the club but faintly incrassated. *Palpi* short; apical joint in all almost cylindrical, with the apex obtuse. *Lingua* often very large and broad, somewhat fan-shaped, hollowed in front and largely dilated at the extremities. *Maxillæ* large, bilobed; exterior lobe variable in length, ciliated at the apex; inner lobe large, strongly hooked at the apex, and densely ciliated in front. *Prosternum* small; *episterna* small and indistinct; *epimera* either wanting, or (as they appear to be in *S. analis*) very large, subtriangular, partly enclosing the coxal cavities. *Mesosternum* rather short; *episterna* large; *epimera* long, humeral, reaching to the coxal cavities. *Meta-sternum* moderate, not extending to the sides of the body; *episterna* large and broad, reaching to the coxal cavities; *epimera* long and narrow, covered by the epipleural folds of the elytra. *Venter* composed of six segments. *Legs* generally long; tarsi 5-jointed, often dilated in the males. *Coxæ*: *anterior* large and very prominent; *intermediate* broad, rather flattened, more or less prominent; *posterior* very large and long.

This widely-distributed genus is represented in Central America by four species.

1. Silpha truncata.

Silpha truncata, Say, Journ. Ac. Phil. iii. p. 193 [1]; Complete Writings, ii. p. 123; Lec. Col. Kans. p. 6, t. 1. f. 3 [2]; Horn, Trans. Am. Ent. Soc. viii. p. 237 [3].

Elongate, rather depressed, deep black, rather shining, the elytra abruptly truncate, the abdomen long. *Head* small, finely and closely punctured; eyes large and rather prominent. *Thorax* rather small, not twice broader than long, widest at the base, very closely and finely punctured, with a deep impression near each posterior angle, and sometimes on the disc also; sides moderately rounded and margined; basal margin trisinuate, with the angles obtuse. *Scutellum* large, finely and closely punctured, with the apex acuminate. *Elytra* short, abruptly truncate, much broader and more than twice longer than the thorax, widest at the extremities, very finely and closely punctured; sides nearly straight, and broadly margined. *Abdomen* often much exposed, very closely and finely punctured, all the segments except the last deeply margined. *Legs* and *antennæ* moderate, black, with the club of the latter considerably incrassated. *Underparts* very closely and finely punctured. Long. ad extr. elytrorum 6–7 lin.=12–14 millim. Lat. elytrorum $3\frac{1}{2}$–4 lin.=7–8 millim.

Hab. North America [1], Nebraska [2], Kansas [3], New Mexico [3], Arizona [3].—Mexico, Pinos Altos in Chihuahua, Rio Mescales (*Buchan-Hepburn*), Ciudad in Durango (*Forrer*), Santa Clara in Chihuahua, Durango city, Chilpancingo, Jalapa, Mexico city (*Höge*), Puebla (*Sallé*).

S. truncata may be readily known by its smooth upper surface and abruptly truncate elytra. It is a common insect in Northern Mexico.

2. Silpha ramosa.

Silpha ramosa, Say, Journ. Ac. Phil. iii. p. 193 [1]; Complete Writings, ii. p. 123; Lec. Proc. Ac. Phil. 1853, p. 279 [2]; Horn, Trans. Am. Ent. Soc. viii. p. 241 [3].

Perfectly oval, convex, deep black, not shining, finely and very closely punctured; with three elevated angulated lines on each elytron, from which short angulated lines branch off transversely on each side. *Head* moderate, rather short, closely punctured; eyes moderate, with two short setæ arising from the lower margin of the orbit. *Thorax* one half broader than long, widest at the base, very closely and very finely punctured, with a faint dorsal line on the disc only, and three faint impressions near the base; sides margined and faintly rounded; base produced towards the scutellum and sinuated at the sides; all the angles obtuse. *Scutellum* broad, acuminate at the apex, deeply and closely punctured. *Elytra* entire, nearly three times longer, and slightly broader than the thorax, widest beyond the middle, marked with three elevated and angulated longitudinal lines, branching on each side into short transverse angulated lines; interstices very finely and very closely punctured; sides scarcely rounded, and broadly margined; apex entire and obtuse. *Legs* and *antennæ* moderate, black, with the club of the latter very slightly incrassated. *Underparts* black. Long. corp. 7–8 lin.=14–16 millim.

Hab. North America, United States [1 2].—Mexico, Northern Sonora (*Morrison*).

One example. This well-named species may be recognized by the sculpture of its elytra, which much resembles the branches of a fruit-tree trained against a wall. *S. ramosa* is a very widely-distributed species in the United States, and extends southward to Sonora.

3. Silpha analis.

Necrodes analis, Chevr. Mag. Zool. 1843, Col. Mex. p. 26 [1].

Ovate, depressed, rather shining, black, with the thorax red, the elytra entire with three strongly elevated longi-

tudinal costæ, the head and thorax small, the elytra long and broad. *Head* very small, faintly punctured, with a deep reniform impression on each side, and both transversely and longitudinally impressed on the vertex. *Thoraæ* small, red, with a dark blotch on the disc, twice broader than long, widest before the base, very shining and minutely punctured, with a deep longitudinal impression on each side at the base, terminating near the middle in a deep lateral fovea; disc very uneven, depressed towards the base; sides much rounded and flattened, faintly margined; base trisinuate, with the angles obtuse. *Scutellum* large, rather deeply punctured, much acuminated at the apex. *Elytra* entire, very large, much broader, and more than three times longer than the thorax, widest near the middle, very minutely and very closely punctured, with the suture and three longitudinal costæ much elevated; outer costa short, terminating at the callosity, both inner costæ reaching to the apex, the middle costa less elevated than the others; sides ovally rounded and margined; apex slightly sinuated at the sides in the females, and very sharply pointed in both sexes. *Legs* and *antennæ* rather long and slender, black, with the club of the latter much incrassated. *Underparts* black and shining, with the sides of the thorax and the apical segment of the venter bright red. Long. corp. 7–11 lin.=14–22 millim. Lat. 3–5 lin.=6–10 millim.

Hab. MEXICO, Ciudad in Durango (*Forrer*), Cordova, Orizaba [1] (*Sallé*), Tacambaro, Jalapa, Cholula in Puebla (*Höge*); GUATEMALA, Purula (*Champion*); NICARAGUA, Chontales (*Belt*, *Janson*); COSTA RICA, Irazu (*Rogers*); PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).—? BRAZIL [1].

This conspicuous species may be known by its small red thorax with a central dark mark, and by its very large, peculiarly sculptured, and very sharply pointed elytra. It varies to a great extent in size, some specimens being two thirds less than others. *S. analis* is a common species throughout Central America.

4. Silpha lapponica.

Silpha lapponica, Herbst, Käfer, v. p. 209, t. 52. f. 4 [1]; Lec. Proc. Ac. Phil. 1853, p. 278 [2]; Horn, Trans. Am. Ent. Soc. viii. p. 238 [3].

Silpha caudata, Say, Journ. Ac. Phil. iii. p. 192 [4]; Complete Writings, ii. p. 122.

Silpha tuberculata, Germ. Ins. Spec. Nov. p. 81 [5].

Silpha californica, Mannerh. Bull. Mosc. 1843, ii. p. 253 [6].

Oiceoptoma (*Thanatophilus*) *lapponicum*, Kirby, Faun. Bor.-Am. iv. p. 100 [7].

Oiceoptoma (*Silpha*) *granigera*, Chevr. Col. Mex. Cent. i. fasc. 1. no. 1 [8].

Depressed, dull black, sparingly covered with fulvous hairs, rugosely tuberculate. *Head* small, the eyes rather prominent. *Thorax* twice broader than long, widest at the base, closely punctured, and covered with large tubercles in rather regular rows; sides rounded and strongly margined; basal margin trisinuate and produced towards the scutellum. *Scutellum* large, closely punctured, the apex acuminate. *Elytra* broader and more than twice longer than the thorax, widest beyond the middle, closely punctured; with three elevated longitudinal costæ, of which the outer one is shorter and more elevated than the others, and the inner longer than the intermediate, and reaching nearly to the apex; the interstices ornamented with large tubercles at rather regular intervals; sides depressed and deeply margined, very faintly rounded; sutural angles produced in the females. *Legs* and *antennæ* black, with the club of the latter short and oval. Long. corp. 7–8 lin.=14–16 millim.

Hab. NORTH AMERICA, Alaska [3], Canada [3 7], United States [2 3 4 5 6].—MEXICO [2 3 8], San Andres Chalchicomula (*Sallé*), Las Vigas, Mexico city, Sayula, Jalapa (*Höge*).—BOREAL EUROPE [1].

A very widely distributed species throughout the whole of North America, and extending southwards to Mexico.

PTEROLOMA.

Pteroloma, Gyllenhal, Ins. Suec. iv. p. 418 (1827).

Body elongate, in form somewhat resembling many species of Carabidæ. *Head* sessile, elongate in front. *Thoraæ* either subcordiform, or dilated towards the base. *Scutellum* triangular. *Elytra* entire, generally long and striated. *Antennæ* long and slender, rather moniliform, and slightly incrassated towards the apex; inserted beneath a small frontal plate; 11-jointed, with the third joint rather the longest, and the apical joint obliquely truncate. *Palpi*: *maxillary* long and slender, 4-jointed, 1 very small and short, 2 very long, slightly incrassated towards the apex, 3 of a similar form, but shorter, 4 elongate-oval, pointed at the apex; *labial* rather short and robust, widely divergent, with the apical joint incurved, 3-jointed, 1 short and slender, 2 large and pyriform, with the apex truncate and furnished with a short seta at the outer angle, 3 shorter, obtusely oval. *Labrum* very short and broad, obtusely bilobed, furnished with four long equidistant setæ on the anterior margin. *Mandibles* rather long, robust, acutely pointed and armed with two strong sharp teeth below the apex. *Maxillæ* moderate, bilobed; exterior lobe rather small, furnished with a long brush of setæ at the apex; inner lobe sharply hooked at the apex, and furnished with long setæ for more than halfway down its inner edge; stipes rather small, attenuated towards the base. *Mentum* short, transverse, widest at the base and rounded at the sides; submentum large, subquadrate, dilated at the base. *Labium* short, falcate at the apex, with the extremities acutely pointed, and furnished with very large and broad paraglossal plates. *Lingua* long and narrow, with its trifid extremity alone visible beyond the paraglossal plates. *Prosternum* moderate; *episterna* rather large, triangular; *epimera* very small and indistinct; coxal cavities open behind, pyriform and contingent. *Mesosternum* rather large; *episterna* moderate, not humeral; *epimera* humeral, long, and oblique, extending to the coxal cavities; coxal cavities rather large, pyriform, not contingent. *Metasternum* moderate, not extending to the sides of the body; *episterna* broad and short; *epimera* large, reaching beyond the coxæ; coxæ large, pyriform, moderately distant, extending to the epimera. *Venter* long, composed of six segments of nearly equal length, each segment separately convex; apical segment in the male divided for its whole length in the middle, with each side separately rounded, and an arcuated suture extending from the middle of each side to the base of the segment; the extremity of the last abdominal segment extending considerably beyond the emargination of the corresponding ventral segment. *Legs* long and slender; tibiæ rather spinose, armed with many spurs at the apex; tarsi 5-jointed, the anterior and intermediate pairs dilated in the males; claws simple. *Coxæ*: *anterior* contingent and prominent; *intermediate* narrowly separated, prominent; *posterior* more widely separated.

This genus contains a few species inhabiting the northern parts of Europe and America; one species is found at a high elevation in Mexico.

1. **Pteroloma sallæi,** sp. n. (Tab. III. fig. 11.)

Angustum, elongatum, nitidissimum, piceo-castaneum; capite modico, antice elongato, deflexo, distincte et leviter punctato, impressionibus quatuor foveolatis inter oculos notato; oculis modicis, sat prominentibus; pronoto subcordato, quam caput haud longiore, vix latiore, antice latissimo, disco impunctato, glabro, depressionibus quatuor foveolatis impresso, postice sat profunde punctato, lateribus sat late marginatis, margine ipsa sat profunde punctata, basi marginata, fere recta, angulis sat obtusis; elytris pronoto plus quam duplo longioribus, sat latioribus, pone media latissimis, profunde punctato-striatis, interstitiis glabris, nitidis, lateribus late marginatis, apice obtuso; pedibus atque antennis longis, gracilibus, castaneis. Long. corp. $2\frac{1}{4}$ lin. = 4·50 millim.

Body narrow, elongate, dark castaneous, and very shining. *Head* moderate, elongate in front, deflexed, lightly but distinctly punctured, with four foveolate impressions between the eyes; eyes moderate, slightly prominent; antennæ slender and very long. *Thorax* subcordate, broader but not longer than the head, widest anteriorly, disc smooth and impunctate, with four deep depressions in the middle, rather deeply punctured towards the base; sides rather broadly margined, with the margin itself punctured; base margined, nearly straight, with the angles rather obtuse. *Scutellum* moderate, triangular, impunctate. *Elytra* rather broader, and more than twice longer than the thorax, widest behind the middle, deeply

punctate-striate, the interstices smooth and shining, with a few larger punctures on the fifth and seventh, the sides broadly margined, the apex obtuse. (In this specimen there are irregular depressions on the elytra, which appear to have been caused by immaturity.) *Legs* very long and slender, castaneous; the four anterior tarsi dilated at the base. *Underparts* pitchy-castaneous, rather strongly alutaceous, with remote setigerous punctures on the ventral segments; apical segment very deeply bilobed (probably a sexual distinction), exposing the extremity of the last abdominal segment.

Hab. Mexico, Volcan de Orizaba (*Sallé*).

This interesting species differs from any which have been previously described in its narrow and more elongate form, smaller size, differently shaped thorax, and general sculpture. As this is the only specimen of the genus I have ever seen, I cannot specify its peculiarities more distinctly; but in *P. sallæi* I can find no vestige of the frontal ocelli mentioned by some authors: the deep impressions between the eyes are certainly present, but they contain nothing in the form of ocelli. In this matter I do not intend to follow the example of some naturalists, who, from the examination of a single individual, boldly assert that certain characters do not exist in specimens which they have never seen; but merely to say that in the *Pteroloma* now before me I can find no trace of the ocelli in question.

CHOLEVINA.

CHOLEVA.

Choleva, Latreille, Précis Caract. Gén. Ins. p. 14 (1796).

Body more or less ovate, generally convex and pubescent. *Head* subtriangular, not retractile, fitted by an abrupt ridge to the front of the pronotum. *Thorax* moderate, sometimes small, generally widest at or near the base. *Elytra* entire, often large. *Antennæ* often long and slender, 11-jointed, very slightly thickened towards the apex, the 8th joint smaller than the 7th or 9th. *Prosternum* rather large, broadly enclosing the coxal cavities; *episterna* moderate; *epimera* large and broad; coxal cavities moderate, contingent, enclosed behind. *Mesosternum* rather large, not separating the coxal cavities; *episterna* large, humeral; *epimera* very large and broad, extending to the coxal cavities; coxal cavities large, contingent. *Metasternum* very short, not extending to the sides of the body; *episterna* long, reaching to the coxæ; *epimera* very long, extending beyond the coxæ; coxæ very large, pyriform, not contingent. *Venter* composed of six segments. *Legs* generally long.

A genus of almost universal distribution, though apparently very rare in tropical regions; two species only have been received as yet from Central America.

1. **Choleva fimbriata,** sp. n. (Tab. III. fig. 10.)

Ovata, sat lata, castanea, pilis densis ad margines longioribus vestita; capite parvo, postice abrupte truncato, profunde et confertim punctato, interstitiis alutaceis; oculis sat magnis, valde prominentibus; pronoto brevi, quam caput vix longiore, sed latiore, basin versus latissimo, profunde et confertim punctato, interstitiis profunde alutaceis, antice et lateraliter rotundato, margine basali leviter sinuata angulis rotundatis; elytris quam caput atque pronotum sesqui-longioribus, parum latioribus, ante media latissimis, ordinibus transversis fere rectis, profunde et confertissime punctatis, lateribus marginatis, apice obtuso; pedibus modicis, castaneis, tibiis spinosis et calcaribus ad apices armatis, tarsis anticis valde dilatatis; antennis modicis, castaneis, articulo septimo cæteris majore, octavo exiguo, apicali acutissimo. Long. corp. $2\frac{1}{8}$ lin. =4·25 millim.; lat. 1 lin.=2 millim.

Body ovate, rather broad, castaneous, densely pilose, fringed with longer hair on the margins. *Head* small, abruptly truncate posteriorly, deeply and closely punctured, with the interstices alutaceous; mouth

prominent; eyes rather large and very prominent; antennæ moderate, castaneous, with the seventh joint the largest of all, the eighth joint very minute, and the apical joint much acuminated. *Thorax* short, shorter but broader than the head, widest near the base, deeply and closely punctured, with the interstices strongly alutaceous; sides and front continuously rounded; basal margin faintly sinuated, with the angles rounded. *Scutellum* rather small, triangular, deeply punctured. *Elytra* broader and one half longer than the head and thorax, widest before the middle, deeply and very closely punctured in almost straight transverse rows, the sides margined, the apex obtuse. *Legs* moderate, castaneous; tibiæ spinose, armed with spurs at the apex; anterior tarsi strongly dilated (♂?).

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*). One specimen.

2. **Choleva semipicea,** sp. n.

Ovalis, sat angusta, modice convexa, pallide castanea, elytris postice nigro-piceis, pilis aureis dense vestita; capite modico, sat lato, profunde punctato, interstitiis alutaceis; oculis modicis; pronoto parvo, quam caput latiore, haud longiore, prope basin latissimo, ordinibus transversis irregularibus profunde et confertim punctato, interstitiis alutaceis, lateribus rotundatis et marginatis, margine basali leviter sinuata angulis obtusis; elytris sat longis, postice infuscatis, quam caput atque pronotum parum latioribus sesqui-longioribus, prope media latissimis, ordinibus rectis transversis sat profunde strigose punctatis, stria suturali impressis, lateribus sat late marginatis, apice obtuso; pedibus atque antennis modicis, rufescentibus, harum articulo apicali pallido. Long. corp. $1\frac{1}{8}$ lin.=2·25 millim.

Body oval, rather narrow, moderately convex, pale castaneous, posteriorly piceous, densely clothed with golden pubescence. *Head* moderate, rather broad, deeply punctured, with the interstices alutaceous; eyes moderate; antennæ moderate, rufescent, with the apical joint pale. *Thorax* small, broader but scarcely longer than the head, widest near the base, deeply and closely punctured in irregular transverse rows, with the interstices alutaceous; sides rounded and margined; basal margin faintly sinuated, with the angles obtuse. *Scutellum* moderate, triangular, deeply punctured. *Elytra* rather long, posteriorly piceous, one half longer and rather broader than the head and thorax, widest near the middle, rather deeply and strigosely punctured in nearly straight transverse rows, the sutural stria moderate, the sides rather broadly margined, the apex obtuse. *Legs* moderate, rufescent; tibiæ spinose. *Underparts* castaneous.

Hab. Guatemala, San Gerónimo 3000 feet (*Champion*).

This species appears to differ from *C. terminans*, Lec., in the rounded posterior angles of its thorax; it is distinguished from others of the genus by its rather narrow form and semipiceous colour.

PTOMAPHAGUS.

Ptomaphagus, Illiger, Kugel. Verz. Käf. Preuss. p. 84 (1798).

Body oval or oblong, sometimes rather depressed, pubescent. *Head* not retractile, fitted by an abrupt ridge to the front of the pronotum, generally subtriangular. *Thorax* often rather large, widest at the base, generally transversely strigose. *Elytra* more or less oblong, often partially truncate at the extremities, generally transversely strigose. *Antennæ* moderate, sometimes rather short, gradually incrassated towards the apex; 11-jointed, with the eighth joint much smaller than the seventh or ninth. *Prosternum* very short, scarcely enclosing the coxal cavities in front; *episterna* moderate; *epimera* large, enclosing the coxal cavities behind; coxal cavities large, contingent. *Mesosternum* moderate, elevated between the coxal cavities; *episterna* large, humeral; *epimera* short and very broad, reaching to the coxal cavities; coxal cavities large, oval, and oblique, separated by the mesosternum. *Metasternum* moderate, not extending to the sides of the body; *episterna* small, scarcely reaching the coxæ; *epimera* long, extending beyond the coxæ; coxæ moderate, oval. *Venter* composed of six segments. *Legs*: *anterior* rather short, the tibiæ much dilated towards the apex, the tarsi dilated in the males; *intermediate* long, the tarsi slightly dilated in the males; *posterior* long, the tarsi long and simple; all the tarsi 5-jointed.

This genus has been, I think properly, separated from *Choleva* by the great comparative differences which exist in the external skeleton of the underside: the most conspicuous of these are the size of the prosternum, the shape of the mesosternum, which latter separates the coxal cavities by a carinal elevation, and also differs in the form of its side-pieces, and the large size of the metasternum. *Ptomaphagus* also differs from *Choleva* in the sculpture and outline of the elytra, which are seldom perfectly entire at the apex.

Of these differences the most conspicuous is the elevation of the mesosternum between the intermediate coxæ.

1. **Ptomaphagus forticornis,** sp. n. (Tab. III. fig. 9.)

Oblongo-ovatus, sat angustus, castaneus, pilis brevibus aureis vestitus, per totum confertim strigose punctatus; capite sat magno, ore valde producto; oculis magnis, prominentibus; pronoto subquadrato, quam caput sat longiore et latiore, ad basin latissimo, lateribus leviter marginatis, margine basali leviter sinuata angulis rectis; elytris longis, quam caput atque pronotum fere duplo longioribus, vix latioribus, prope humeros latissimis, stria suturali sat profunda impressis, lateribus marginatis, apice valde obtuso; pedibus longis, gracilibus, castaneis; antennis castaneis, clavis obscurioribus, sat brevibus, robustis, articulis 5° et 6° perbrevibus, transversis, clavis leviter incrassatis. Long. corp. $1\frac{3}{4}$ lin.=3·50 millim.

Body oblong-ovate, rather narrow, castaneous, clothed with short golden pubescence, on all parts closely and strigosely punctate. *Head* rather large, the mouth much produced; eyes large and prominent; antennæ rather short and robust, castaneous, with the club dusky, the fifth and sixth joints very short, transverse, the club faintly incrassated. *Thorax* subquadrate, rather longer and broader than the head, widest at the base; sides slightly margined; basal margin faintly sinuated, with the angles rectangular. *Scutellum* small, triangular. *Elytra* long, scarcely broader but almost twice longer than the head and thorax, widest near the shoulders, with a rather deep sutural stria; sides margined; apex very obtuse. *Legs* long and slender, castaneous; tibiæ spinose. *Underparts* castaneous; mesosternum strigose, with the carina strongly elevated.

Hab. Mexico, Cordova (*Sallé*).

2. **Ptomaphagus consobrinus.**

Catops consobrinus, Lec. Proc. Ac. Phil. 1853, p. 281[1].

Ptomaphagus consobrinus, Horn, Trans. Am. Ent. Soc. viii. p. 263[2].

Obtuse conicus, angustus, leviter depressus, pallide castaneus, pube aurea vestitus; per totum confertim et sat profunde strigosus, strigis elytrorum obliquis; capite magno, lato, sat nitido, ore modice producto; oculis sat parvis, haud prominentibus; pronoto modico, quam caput sat longiore atque latiore, ad basin latissimo, lateribus marginatis, margine basali fere recta angulis acutis; elytris postice attenuatis, quam caput atque pronotum vix latioribus, duplo longioribus, ad humeros latissimis, lateribus vix rotundatis, marginatis, apicibus rotundatis, valde obtusis; pedibus longis, gracilibus, rufo-castaneis, tibiis simplicibus, tarsis longis, anterioribus dilatatis; antennis modicis, rufo-piceis, articulis duobus basalibus flavis. Long. corp. $1\frac{1}{4}$ lin. =2·50 millim.

Body obtusely conical, narrow, slightly depressed, pale castaneous, clothed with golden pubescence, on all parts closely and transversely strigose, with the strigæ on the elytra oblique. *Head* large and broad, rather shining, the mouth moderately produced; eyes rather small, not prominent. *Thorax* moderate, rather longer and broader than the head, widest at the base; sides margined; basal margin almost straight, with the angles acute. *Scutellum* moderate, triangular. *Elytra* rather attenuated posteriorly, scarcely broader but twice longer than the head and thorax, widest at the shoulders; sides scarcely rounded, margined;

extremities obtuse and rounded. *Legs* long and slender, rufo-castaneous; tibiæ simple; tarsi long, the anterior pair dilated. *Antennæ* moderate; rufo-piceous, with the two basal joints yellow.

Hab. North America, Georgia [1], Michigan to Florida, Texas, Arizona, and California [2]. —Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

Differs from others of the genus in its narrow, attenuated, and obliquely strigose elytra.

COLON.

Colon, Herbst, Käfer, vii. p. 224 (1797).

Body generally ovate or oval, convex, and densely pubescent. *Head* moderate, sessile, without any occipital ridge. *Thorax* sometimes large, widest at or near the base. *Elytra* rather long, entire. *Antennæ* generally short; 11-jointed, 6–11 forming a gradually incrassated club. *Palpi*: *maxillary* with the third joint ovate, much incrassated, and the fourth joint slender, acicular. *Prosternum* very small; *episterna* indistinct, apparently small; *epimera* small, inflexed beneath the coxal cavities; coxal cavities moderate, rounded, open behind. *Mesosternum* carinated; *episterna* large, triangular, extending to the coxal cavities; *epimera* humeral, large and long, extending to the coxal cavities; coxal cavities separated by the carina. *Metasternum* moderate, not reaching the sides of the body; *episterna* large and long, extending beyond the coxæ; *epimera* very narrow, wholly covered by the epipleural folds of the elytra; coxæ contingent, not reaching the sides of the body. *Venter* with the segments variable in number, generally four or five. *Legs* moderate, usually robust; tibiæ spinose; femora sometimes armed with incurved teeth on the inner side; tarsi 5-jointed, the anterior pair generally dilated in the males.

This is a genus containing numerous species, nearly all of which are of rare occurrence, in Europe and Temperate North America. One species is now known from Guatemala.

1. **Colon clavatum.** (Tab. III. fig. 12.)

Colon clavatum, Mannerh. Bull. Mosc. 1853, iii. p. 178 [1]; Horn, Trans. Am. Ent. Soc. viii. p. 273 [2].

Elongato-ovale, fuscum, convexum, rugose punctatum, pube sat longa densa vestitum; capite sat magno, deflexo, ore sat producto; oculis magnis, sat prominentibus; pronoto magno, quam caput multo longiore atque latiore, prope basin latissimo, lateribus marginatis et rotundatis, margine basali fere recta angulis obtusis; elytris sat longis, quam caput atque pronotum vix latioribus, sed duplo longioribus, prope humeros latissimis, punctis ordinibus longitudinalibus irregulariter dispositis, stria suturali sat profunda, ad humeros non extensa, impressis, lateribus marginatis, apice valde rotundato; pedibus modicis, rufo-fuscis, tibiis parum dilatatis, tenuiter spinosis, tarsis anterioribus dilatatis, calcari uno vel pluribus armatis; antennis brevibus, valde robustis, fuscescentibus, gradatim ad apices incrassatis. Long. corp. $1\frac{1}{4}$ lin.=2·50 millim.

Body elongate-oval, convex, brown, clothed with rather long and dense pubescence, rugosely punctured. *Head* rather large, deflexed, the mouth slightly produced; eyes large and rather prominent; antennæ short, very robust, fuscous, gradually incrassated towards the apex. *Thorax* large, much longer and broader than the head, widest near the base; sides rounded and margined; basal margin nearly straight, with the angles obtuse. *Scutellum* small, triangular, deeply punctured. *Elytra* rather long, scarcely broader but twice longer than the head and thorax, widest near the shoulders, with the punctures irregularly arranged in longitudinal rows; sutural stria rather deeply impressed, but not reaching to the scutellum; sides margined; apex much rounded. *Legs* moderate, rufous-brown; tibiæ slightly dilated, sparingly spinose, with one or more spurs on the inner side of the apex; anterior tarsi dilated. *Underparts* rufous-brown.

Hab. North America, Alaska [1] [2], Vancouver [2], Nevada [2], Colorado [2], California [2].—Guatemala, Chiacam (*Champion*).

One specimen. This species seems to be distinguished by its long and coarse pubescence, its rugose sculpture, and gradually clavate, short, antennæ.

Fam. CORYLOPHIDÆ*.

If we can judge by the distribution of the species hitherto discovered, the Corylophidæ seem to be especially adapted to the tropical parts of the globe. The total number of described species from all parts of the world to the date of publication of Gemminger and Harold's Catalogue amounted to fifty-nine; from Central America alone I have now to record twenty-nine species, the majority of which are described as new. The genera already known are all represented in our region, except *Peltinus*, *Aphanocephalus*, *Phœnocephalus*, and *Microstagetus*; but the deficiency is compensated by the addition of four new and very distinct forms described in the following pages under the names of *Ænigmaticum*, *Conodes*, *Ectinocephalus*, and *Micröum*.

The study of the Corylophidæ is attended with much difficulty, chiefly owing to the fact that the diagnostic characters often consist, among the species as well as the genera, in the number and form of the articulations of the antennæ. From the peculiar position and shape of the head it is generally a matter of some trouble to bring these limbs into sight, and the difficulty is further increased by the deep grooves, extending round the outer margin of the eye far into the prothorax, in which they are usually embedded; and, moreover, after the antennæ have been extended, the exceedingly minute size of the intermediate articulations often renders it almost impossible to count them without the aid of some transparent medium. Again, the small space into which they are compressed and the excessive fragility of their structure render the dissection of the organs of the mouth a task of so much difficulty, that, if you have regard to the preservation of a type, it is unwise to hazard the attempt on any species of which only one or at the most two examples have been found. In the case of a genus represented by numerous individuals dissection is admissible, but even then may possibly require two or three trials before a full series of the various organs can be obtained. I have therefore refrained from attempting to dissect the parts of the mouth in three new genera; of all the rest I have obtained a perfect series, and have felt rewarded for the trouble it has cost by being enabled to see the unusual complicity and beauty of their anatomy.

The Corylophidæ not having yet been thoroughly characterized I give a full definition:—

General Characters.

Body generally short, more or less rounded; in the 'Saciina' alone elongate. *Head* usually concealed by the pronotum; in the 'Orthoperina' and some aberrant genera more or less exserted. *Thorax* with the anterior margin entire, or slightly excavated in *Conodes* and the 'Orthoperina.' *Elytra* ovate, with the apex entire; or elongate, with the apices separately rounded (Saciina). *Wings* ample, oval, not pedunculate; with a strong costal nerve extending from the base to less than half the length of the wing, and a single very fine nerve passing from the base obliquely towards the posterior margin of the wing; posterior margin fringed with short hairs. *Antennæ* clavate, varying much in the numbers of the joints, often

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* By A. Matthews.

geniculate; the two basal joints large, the first generally recurved; the intermediate joints small and short, the last but one often larger than the rest; the three terminal joints always forming a much incrassated club; when not in use these organs are received into a deep groove which passes round the outer margin of the eye and extends with an outward curve into the prothorax. *Palpi*: *maxillary* large, 4-jointed, with the second joint much larger than the rest, and the fourth generally long and conical; *labial* 3-jointed, with the second joint very large and often turgidly incrassate, the apical joint either acicular or rounded, or abruptly truncate. *Maxilla* unilobed, the lobe long and robust and usually armed at the apex with many long and very sharp teeth; in *Rhypobius* alone simple. *Mandibles* variable in form, generally armed at the apex with many long and very sharp teeth; in *Rhypobius* long and very slender, deeply bifid at the apex. *Mentum* quadrate or oblong. *Labium* oblong, sometimes much elongate. *Lingua* variable in form. *Labrum* generally small; rounded, or emarginate in front. *Head* below, in *Sacium* and *Arthrolips*, very small and very narrow and with very small eyes; in all other genera transverse, with the gular region convex and the organs of the mouth very prominent, and the eyes often large and very conspicuous. *Prosternum* usually short, much elevated between the coxæ, and prolonged and dilated posteriorly; *epimera* generally very large, enclosing the coxal cavities in many genera. *Mesosternum* usually large; *episterna* and *epimera* large, the latter, except in *Micröum* and *Conodes*, not extending to the cavities. *Metasternum* moderate, not extending to the sides of the body; *episterna* and *epimera* broad and very long. *Venter* composed of five or six segments; the basal segment very large, nearly as long as the others combined; the apical segment simple (at least in the Central-American genera). *Legs* sometimes long and slender, usually simple; in *Orthoperus* the anterior tibiæ are often very long and much incurved; tarsi 4-jointed, the three basal joints short, the third joint often very small, the terminal joint elongate; the claws either long and slender, and faintly curved, sometimes convergent anteriorly, or robust, strongly hooked, and denticulate on the lower edge.

The whole Family may be divided by superficial characters into the following four Tribes, viz.:—

Posterior angles of the thorax produced . . . . . **Sericoderina.**
Posterior angles of the thorax not produced.
  Form elongate . . . . . **Saciina.**
  Form rounded.
    Head wholly concealed . . . . . **Corylophina.**
    Head partly exposed . . . . . **Orthoperina.**

The division of Families into Tribes is purely artificial, of no real scientific importance, but useful as a help towards the harmonious arrangement of form, and as affording to the mind some idea of the general appearance of a genus previously unknown. But it appears to me that this division, if carried too far, would become perplexing and unnecessary. The four new genera described in the following pages form a striking illustration of the point in question. These genera differ equally from any of the Tribes above mentioned, and from each other. In this case, if strict definition was imperative, each would demand a separate Tribe to contain itself, and itself alone. If hereafter other genera be discovered bearing close affinity to either of these, their generic characters might then assume a divisional importance, and justify the creation of a fresh Tribe.

But for the present it will be more expedient to place *Conodes* and *Ectinocephalus* with the 'Saciina' (although in each the head is more or less exserted beyond the thorax), and *Micröum* with the 'Corylophina.'

SACIINA.

Head more or less exposed.
- Thorax rounded at the sides, widest near the middle . ÆNIGMATICUM.
- Front of the thorax entire . . . . . ECTINOCEPHALUS.
- Front of the thorax excised . . . . . CONODES.

Head wholly concealed.
- Antennæ 11-jointed . . . . . SACIUM.
- Antennæ 10-jointed . . . . . ARTHROLIPS.

ÆNIGMATICUM *, gen. nov.

Body elongate-oval, with the head exserted. *Head* small, produced in front; eyes very large and very prominent. *Thorax* moderate, subcordiform. *Scutellum* large, rounded at the apex. *Elytra* entire, long, with the extremities separately rounded. *Abdomen* with the pygidium exposed. *Antennæ* inserted near the eyes, 9-jointed—1 very large, pyriform, slightly recurved, 2 oval, rather smaller than 1, 3 and 4 small and slender, 5 much larger than 4, 6 small, same size as 4, 7–9 large and much incrassated, forming a rather loose club, of which the apical joint is the largest. *Palpi*: *maxillary* rather large, 4-jointed—1 very small, 2 very large, turgidly incrassate, oval, with the apex truncate, 3 and 4 forming a slender long point, obtuse at the apex, and furnished with short apical setæ, the third joint short and transverse; *labial* rather large, 3-jointed—1 very small, 2 very large, turgidly incrassate, oval, with the apex slightly truncate, 3 small and conical. *Labrum* large, subquadrate, slightly rounded in front. *Mandibles* small and rather slender, with the apex much hooked and acute, furnished at the base with a subconical process, its front surface flat and transversely ribbed. *Maxillæ* unilobed, the lobe long and rather broad, with its apex acute, faintly incurved, and minutely denticulate on the upper part of the edge. *Mentum* short, transverse, suboblong. *Labium* short, transverse, faintly contracted at the base, with the anterior angles much rounded. *Lingua* very long and narrow, with its extremity nearly straight. *Prosternum* large, broadly produced between the coxal cavities, and much dilated behind them; *episterna* long and narrow; *epimera* large, broadly enclosing the coxal cavities; coxal cavities rather small, oval. *Mesosternum* rather short; *episterna* moderate, humeral; *epimera* short and broad, not extending to the coxal cavities; coxal cavities nearly circular, moderately distant. *Metasternum* large, not extending to the sides of the body, broadly produced and faintly rounded between the coxæ; *episterna* large and long, almost reaching to the coxæ; *epimera* long and narrow, extending beyond the coxæ; coxæ small, pyriform, widely separated. *Venter* composed of six segments, with the first nearly as long as the other five united. *Legs*: *anterior* femora moderate, the tibiæ simple, slightly dilated towards the apex, the tarsi very short, 4-jointed, with the basal joint very small, and the apical joint robust, much longer than the three basal joints united, the claws moderate, much curved; *intermediate* similar in form to the anterior, but longer, with the tarsi distinctly 4-jointed; *posterior* similar in form, but longer than the intermediate, the femora longer and much more robust, the tarsi distinctly 4-jointed. *Coxæ*: *anterior* oval, moderately distant; *intermediate* rounded, moderately distant; *posterior* small, pyriform, widely separated.

This curious genus is an apt illustration of the importance of the external skeleton of the underside, combined with the organs of the mouth, in affording a correct clue to systematic arrangement. At first sight the upper surface presents but few of the characters usually considered to be indicative of the Corylophidæ, and its outward form seems more suggestive of relationship to either *Ptilium* or *Corticaria*; and it is only by the anatomy of the underside of its external skeleton and of the organs of the mouth that its true affinities can be discovered.

In all these points *Ænigmaticum* is purely Corylophide, and varies but little from

* Αἰνιγματικον, a puzzle.

the most normal type of the family. This is especially evident in the mesosternum, the first ventral segment, the unilobed maxillæ, and the excessively enlarged second joint of both the maxillary and labial palpi; while on the upperside the antennæ alone present a Corylophide appearance.

In the first distribution of Mr. Champion's collection this species was sent to me among the Trichopterygidæ, and subsequently returned with some others evidently not Trichopterygidæ to Dr. Sharp. Subsequently, at Dr. Sharp's request, I undertook the revision of the Central-American Silphidæ and Corylophidæ, and he then forwarded this insect to me with the observation that "unless it was a Corylophide he was at a loss to discover to what family it could belong." Having previously noticed its peculiar appearance I had retained a mutilated specimen of the same species, and from this have fortunately been able to make the dissections, which have, as it seems to me, placed its true position beyond the possibility of doubt.

The single species is from Guatemala.

1. **Ænigmaticum ptilioides,** sp. n. (Tab. III. figg. 13, 13 *a*.)

Ovale, modice convexum, totum alutaceum, rufo-brunneum, parum æratum; capite parvo, prominente, antice producto; oculis magnis, prominentibus; pronoto modico, subcordato, medio latissimo, basin versus contracto, profunde alutaceo, punctis sat magnis remote et equidistanter dispositis ornato, lateribus marginatis et leviter crenulatis, margine basali fere recta angulis fere rectis; elytris sat magnis, quam pronotum parum latioribus, plus quam sesqui-longioribus, ante media latissimis, fortiter alutaceis, punctis remotis striatim dispositis impressis, stria suturali circa scutellum usque ad humeros extensa notatis, lateribus ovaliter rotundatis, leviter marginatis, apicibus latis valde rotundatis; abdominis pygidio exserto, rufescente; pedibus rufo-piceis; antennis flavescentibus, clavis obscuris. Long. corp. $\frac{6}{16}$ lin.= ·75 millim.

Body oval, moderately convex, alutaceous throughout, rufous-brown, slightly brassy. *Head* small, exserted, the mouth produced, alutaceous, with a few remote punctures; eyes large and very prominent; antennæ rather short, flavescent, with the club dusky. *Thorax* moderate, subcordate, widest at the middle, contracted towards the base, deeply alutaceous, ornamented with rather large punctures remotely and rather equidistantly arranged; sides margined and slightly crenulated; basal margin almost straight, with the angles nearly rectangular. *Scutellum* large, obtusely triangular, alutaceous. *Elytra* rather large, one half longer and a little broader than the head and thorax, widest before the middle, deeply alutaceous, marked with remote punctures in longitudinal rows, with a sutural stria prolonged round the scutellum and to the exterior humeral angle; sides ovally rounded and slightly margined; extremities broad and much rounded. *Abdomen* with the pygidium exposed, rufescent. *Legs* rather long, rufo-piceous. *Underparts* pitchy-black.

Hab. GUATEMALA, Capetillo 4500 feet (*Champion*). Two examples.

ECTINOCEPHALUS *, gen. nov.

Corpus elongatum, obconicum. *Caput* totum exsertum; oculis prominentibus; antennis longe ante oculos insertis. *Pronotum* parvum, pone caput rectum, haud excisum. *Elytra* elongata, postice attenuata. *Abdomen* modice exsertum. *Antennæ* haud geniculatæ, articulis decem compositæ, duobus basalibus magnis, tribus ultimis clavam subfoliatam formantibus, apicali subrotundato. *Prosternum* sat magnum, inter coxas elevatum, postice productum et dilatatum; episternis minutis; epimeris sat magnis, recep-

* ἐκτείνω, to extend; κεφαλή, the head.

tacula coxarum late complexis. *Mesosternum* magnum; episternis longis; epimeris longis, trigonalibus, ad coxas extensis. *Metasternum* modicum, corporis lateribus haud attingens, margine posteriore inter coxas recta; episternis latis et longis. *Venter* segmentis sex compositus, basali prælongo, apicali obtuso. *Pedes* sat longi, simplices; tarsis brevibus, robustis, articulis quatuor compositis, apicali cæteris et longiore et tenuiore; unguibus gracilibus, leviter curvatis. *Coxæ*: *anteriores* haud prominentes, per carinam divisæ; *intermediæ* longius, distantes; *posteriores* sat remotæ, breviter pyriformes.

Body elongate, obconical. *Head* wholly exserted, produced anteriorly, convex above and below, the mouth prominent; antennæ inserted considerably in front of the eyes; eyes prominent. *Thorax* small, with the anterior margin entire, straight, but not excavated behind the head; basal margin faintly arcuate, with the angles obtuse. *Scutellum* large, short and broad, obtusely triangular. *Elytra* elongate, attenuated posteriorly, separately rounded at the apex. *Abdomen* moderately exposed. *Antennæ* not geniculated, 10-jointed—1 long, robust, recurved, 2 half as long as and much more slender than 1, 3–7 more slender than 2, transverse, gradually incrassated, 8–10 forming a much incrassate subfoliate club, with the apical joint the largest and rounded. *Parts* of the *mouth* not dissected, but apparently of a normal type. *Prosternum* rather large, elevated between the coxæ, and prolonged and dilated behind them; *episterna* minute; *epimera* rather large, broadly enclosing the coxal cavities; coxal cavities oval and oblique. *Mesosternum* large; *episterna* long and narrow; *epimera* long, subtriangular, extending to the coxal cavities; coxal cavities rounded and rather distant. *Metasternum* moderate, not reaching to the sides of the body; posterior margin between the coxæ straight; *episterna* broad and long; *epimera* narrow, concealed by the elytra; coxal cavities remote from each other, and moderately distant from the sides of the body. *Venter* composed of six segments—1 very long, 2–6 equal in length to each other, the apical segment obtusely rounded, simple. *Legs*: *anterior* with the trochanters small, triangular; femora depressed, long and broad; tibiæ rather shorter, much dilated towards the apex; tarsi short and robust, 4-jointed, with the three basal joints nearly equal, and the apical joint longer and more slender; claws slender and faintly curved; *intermediate* similar to the anterior, but rather longer; *posterior* with the interior angle of the trochanter much prolonged, and the femora robust and very long; tibiæ long, simple, dilated towards the apex; tarsi similar to the anterior, but rather longer. *Coxæ*: *anterior* rounded, not prominent, separated by the elevated portion of the prosternum; *intermediate* rounded, rather distant; *posterior* remote from each other, rather short, pear-shaped, not reaching to the sides of the body.

Ectinocephalus would seem more properly to form a distinct 'Tribe'; but for reasons already stated I have placed it among the 'Saciina,' with which it agrees in the elongate form of the body.

The genus contains a single species from Guatemala.

1. **Ectinocephalus tropicus,** sp. n. (Tab. III. figg. 16, 16 *a*.)

Obconicus, modice convexus, sat nitidus, rufo-testaceus, pilis aureis parce vestitus; capite exserto, sat convexo, antice producto; oculis magnis, valde prominentibus; pronoto modico, antice fere circulariter rotundato, margine anteriore integra et leviter reflexa, confertim et minute tuberculato, sive alutaceo, linea impressa ad basin notato, margine basali fere recta angulis fere rectis; elytris quam caput atque pronotum sat latioribus et fere duplo longioribus, ad humeros latissimis, postice attenuatis, profunde punctatis, interstitiis nitidis, linea suturali profunda impressis, lateribus leviter rotundatis, sat late marginatis, subtus late inflexis, apicibus rotundatis; pygidio exserto; pedibus atque antennis robustis, læte flavis. Long. corp. $\frac{10}{16}$ lin. = 1·25 millim.

Head rather small, convex, produced in front; eyes very large and prominent; antennæ robust, bright yellow. *Thorax* moderate; almost circularly rounded in front, with the margin entire and slightly reflexed, minutely and closely tuberculate or alutaceous, with an impressed line at the base; basal margin almost straight, with the angles nearly rectangular. *Scutellum* small and rounded. *Elytra* rather broader and nearly twice as long as the head and thorax, widest at the shoulders, attenuated posteriorly, deeply punctured, with the interstices shining, a deeply impressed line on each side of the suture; sides slightly

rounded and rather strongly margined, broadly inflexed beneath; apex rounded. *Abdomen* with the pygidium exposed. *Legs* robust, bright yellow. *Underparts* rufo-testaceous.

Hab. GUATEMALA, Capetillo (*Champion*). Two examples.

The prominent and wholly exserted head, which, from its peculiar form, cannot be withdrawn, but is fitted by an elevated ridge to the anterior margin of the thorax, is alone sufficient to distinguish this species from all which have hitherto been discovered.

CONODES *, gen. nov.

Corpus conicum, depressum, pubescens. *Caput* sessile, deflexum; oculis magnis. *Pronotum* antice excisum, angulis posterioribus haud productis. *Elytra* longa, postice attenuata, apicibus rotundatis. *Antennæ* haud geniculatæ, articulis decem compositæ, sexto quam septimo majore, clava valde incrassata. *Prosternum* permagnum, inter coxas elevatum, et postice dilatatum; episternis parvis, angustis; epimeris magnis, receptacula coxarum late complexis. *Mesosternum* longum; episternis longis, angustis; epimeris sat parvis, ad coxas non extensis. *Metasternum* modicum, ad latera corporis non extensum; episternis longis. *Venter* segmentis quinque compositus, primo permagno, apicali præcedente duplo longiore. *Pedes* modici, simplices; tarsis brevibus, robustis; unguibus longis, gracillimis, antice convergentibus.

Body conical, depressed, pubescent. *Head* not concealed by the thorax, sessile, deflexed; eyes large, not prominent; gular region convex; mouth prominent; antennæ inserted some distance in front of the eyes. *Thorax* excised in front, the posterior angles not produced. *Scutellum* large and broad, slightly rounded. *Elytra* long, attenuated posteriorly, separately rounded at the apex, broadly inflexed beneath. *Abdomen* with the pygidium exposed. *Antennæ* not geniculated, 10-jointed—1 long, robust, slightly recurved, 2 smaller than 1, incrassate, 3, 4, 5 very small, 6 larger than 7, 8–10 much incrassate, forming a rather close gradually incrassated club, the apical joint larger than the preceding, rounded. (Parts of the mouth not dissected.) *Prosternum* very large, elevated between the coxæ, produced and dilated posteriorly; *episterna* small and narrow; *epimera* large, broadly enclosing the coxal cavities, the cavities oval, oblique. *Mesosternum* rather large; *episterna* very long and narrow; *epimera* rather small, not extending to the cavities. *Metasternum* moderate, not extending to the sides of the body; *episterna* very long; *epimera* concealed by the elytra; hinder margin of the metasternum straight. *Venter* composed of five segments—1 very long, longer than the metasternum, broadly depressed at the sides to receive the femora, 2–4 nearly equal in length, 5 nearly twice as long as 4, obtuse and simple. *Legs*: *anterior* with the trochanters small, triangular; femora robust; tibiæ simple, much dilated towards the apex; tarsi short, robust, 4-jointed—1 rather longer than 2, 2 and 3 equal, 4 rather short; claws very long and slender, converging anteriorly; *intermediate* similar to the anterior, the tarsi rather longer; *posterior* similar to the preceding, the trochanters with the interior angle much produced and acute. *Coxæ*: *anterior* moderately separated, not prominent; *intermediate* rather distant; *posterior* widely separated, pyriform, rather short, not extending to the sides of the body.

This interesting genus is distinguished from the rest of its family by its depressed conical form, deflexed and sessile head, and by the excavation of the front of the thorax. Like *Ectinocephalus* it bears an outward resemblance to the Cryptophagidæ, but its anatomy is strictly Corylophide; on account of their rarity I have not ventured to dissect the organs of the mouth in this genus, or in *Ectinocephalus*, or *Micröum*, and have therefore refrained from attempting to describe them, although the more prominent parts are sufficiently visible under a high power to satisfy any one that they are of the usual Corylophide type, especially in the shape of the maxillary palpi.

The single species from Guatemala now described is the only one known to me.

* κῶνος, a cone; εἶδος, form.

1. **Conodes conicus,** sp. n. (Tab. III. figg. 17, 17*a*.)

Conicus, sat depressus, nitidulus, testaceus, pilis brevibus aureis vestitus; capite sat parvo, antice attenuato; oculis nigris, sat magnis, haud prominentibus; pronoto brevi transverso, ad basin latissimo, leviter alutaceo, lateribus circulariter rotundatis et marginatis, margine basali fere recta angulis obtusis; elytris longis, quam caput atque pronotum haud latioribus, sed plus quam duplo longioribus, ad humeros latissimis, postice attenuatis, profunde et rugose punctatis, linea suturali profunda impressis, lateribus fere rectis, late marginatis, apicibus valde rotundatis; pygidio exserto; pedibus atque antennis robustis, læte flavis, tibiis dilatatis. Long. corp. $\frac{8}{16}$ lin.=1 millim.

Head moderate, rather acuminate in front, finely punctured or alutaceous; eyes rather large, not prominent; antennæ robust, bright yellow. *Thorax* short, transverse, widest at the base, finely alutaceous; sides margined and circularly rounded; basal margin nearly straight, with the angles obtuse. *Scutellum* large, rounded, and punctured. *Elytra* long, not broader than but more than twice as long as the head and thorax, widest at the shoulders, attenuated posteriorly, deeply and rather rugosely punctured, with a deeply impressed line on each side of the suture; sides nearly straight and rather broadly margined; each apex much rounded. *Abdomen* with the pygidium exposed. *Legs* robust, bright yellow, the tibiæ more or less dilated. *Underparts* testaceous.

Hab. GUATEMALA, Capetillo (*Champion*).

This very distinct and pretty species, of which only two specimens were found, is probably, in life, of a bright golden-yellow.

SACIUM.

Sacium, Leconte, Proc. Acad. Phil. vi. p. 144 (1852).

Body elongate, with the underside very convex. *Head* wholly concealed by the thorax. *Thorax* with the front margin entire, the hinder angles not produced. *Scutellum* small, generally rounded. *Elytra* long, with the apices separately rounded. *Abdomen* with the pygidium exposed. *Antennæ* rather long, 11-jointed—1 long, incrassate, and much recurved, 2 much shorter than 1, incrassate, 3–6 short and slender, 7 often much longer than 8, 8 small, 9–11 much incrassated, forming a subfoliate club. *Palpi*: *maxillary* large, 4-jointed—1 small and slender, 2 very large, pyriform, abruptly truncate, 3 subquadrate, shorter, but scarcely narrower than 2, 4 long, robust, obtusely conical; *labial* large and circularly rounded, 3-jointed—1 very minute, 2 cyathiform, immensely dilated, 3 very large, subquadrate, with anterior margin denticulate. *Mentum* oblong, with the anterior margin deeply excavated. *Labium* elongate, oblong, slightly constricted near the middle, strengthened at the sides with strong costæ, and armed at the anterior extremity with two long, erect, very sharp paraglossal processes on each side. *Lingua* large and broad, emarginate at the apex. *Labrum* small, semioval, emarginate in front. *Maxillæ* unilobed, the lobe very robust, very strongly hooked at the apex, and armed with five very long and very sharp teeth. *Mandibles* not much curved, armed with five very sharp and strong teeth. *Prosternum* moderate, elevated between the coxæ, produced and much dilated beyond them; *episterna* minute; *epimera* large, rather broadly enclosing the coxal cavities; coxal cavities large, rounded. *Mesosternum* short; *episterna* rather small; *epimera* large and broad, not extending to the coxal cavities; coxal cavities rounded, moderately distant. *Metasternum* large, not extending to the sides of the body, the posterior margin between the coxæ straight; *episterna* very large and broad, longer than the metasternum; *epimera* long, concealed by the elytra. *Venter* composed of six segments—1 very large, as long as the metasternum, 2–6 equal to each other in length, the apical segment simple. *Legs* long: *anterior* with the trochanters long, not triangular; femora rather short, simple; tibiæ moderate, widest at the apex; tarsi long, 4-jointed—1 and 2 slightly bifid, 2 smaller than 1, 3 very minute, 4 very long; claws robust, unidentate below; *intermediate* similar to, but much longer than, the anterior; *posterior* similar to, but longer than, the intermediate.

A widely distributed genus containing a large number of described species.

The Central-American species may be separated by the following characters, viz.:—

Elytra variegated.
  Elytra with a narrow transverse fascia near the middle.
    Thorax attenuated in front . . . . . *oberthüri.*
    Thorax not attenuated in front . . . . . *incertum.*
  Elytra with a broad transverse fascia near the middle . . . . *latifasciatum.*
  Elytra with a large pale spot beyond the middle . . . . . *fenestratum.*
  Elytra with a pale longitudinal vitta . . . . . *mexicanum.*
Elytra not variegated.
  Elytra black . . . . . *atrum.*
  Elytra piceous or castaneous.
    Thorax moderate.
      Thorax very broadly margined . . . . . *marginatum.*
      Thorax narrowly margined . . . . . *collare.*
    Thorax large and broad . . . . . *laticolle.*

1. **Sacium oberthüri.** (*S. lecontei*, Tab. III. figg. 15, 15 *a*, *b*.)

Arthrolips oberthüri, Reitter, Verh. zool.-bot. Ges. Wien, xxvii. p. 193 [1].

Sacium oberthüri, Reitter, Mittheil. Münch. ent. Ver. 1877, p. 126.

Oblongo-ovale, modice convexum, sat nitidum, pilis aureis vestitum, vel piceum vel plus minusve rufescens, modice sed distincte punctatum, fascia recta transversa pone media elytra et plerumque humeris atque apicibus eorum rufis ornatum; pronoto plus minusve rufescente, sat parvo, antice angustato, ad basin latissimo, leviter marginato; elytris magnis, quam pronotum multo latioribus, et plus quam duplo longioribus, prope humeros latissimis, apicibus latis rotundatis; pedibus atque antennis rufis. Long. corp. $\frac{12-14}{16}$ lin.=1·50–1·75 millim.

Head small and narrow, rufous; eyes moderate; antennæ moderate, with the club rather large, dusky. *Thorax* more or less rufous, rather small, attenuated in front, widest at the base, moderately and distinctly punctured, with the interstices shining; margin slightly reflexed; basal margin strongly sinuated, with the angles acute. *Scutellum* rounded and punctured. *Elytra* large, much wider, and twice longer than the thorax, widest near the shoulders; piceous, with a straight transverse fascia beyond the middle, and sometimes the shoulders and apex, red; apex broad and rounded. *Legs* rather long and slender, rufous. *Underparts* piceous, moderately and distinctly punctured.

Hab. Mexico [1], Toxpam (*Sallé*); Guatemala, El Tumbador, Quiche Mountains, Capetillo, Zapote, Guatemala city, Vera Paz (*Champion*).

Differs from other species in its large size, longer and more or less rufous thorax, straight red fascia on the elytra, and in sculpture; the elytra are sometimes, but very rarely, unicolorous. From *S. fasciatum*, Lec., this species is separated by its larger size, broader form, much longer thorax, deeper sculpture, and shape of the transverse fascia on the elytra. An example from Zapote is figured.

At the time our Plate was drawn I had overlooked the descriptions of the Mexican *Sacia* described by Reitter. I have little doubt that the species figured by me under the name of *S. lecontei* is referable to *S. oberthüri*; the description is, however, too vague to be positively conclusive, *e. g.* reference to the sculpture is totally omitted, although so important.

2. **Sacium incertum,** sp. n.

Ovale, modice convexum, nitidulum, leviter et confertim punctatum, pilis aureis dense vestitum, fusco-castaneum, fasciis maculisque rubris variegatum; pronoto magno, antice modice reflexo et ovaliter rotundato, haud attenuato, modice et confertim punctato, interstitiis glabris, nitidis, linea basali sat profunda, rufescente, disco plus minusve obscurato, margine basali sinuata angulis rectis; elytris quam pronotum vix latioribus, plus quam sesqui-longioribus, prope humeros latissimis, postice haud attenuatis, leviter et confertissime punctatis, interstitiis glabris, nitidis, fusco-castaneis, fascia mediali lata, transversa, recta, maculisque rufis ad humeros atque apicis variegatis, stria suturali indistincta, lateribus leviter marginatis, apicibus latissimis, minime rotundatis; pygidio rufo; pedibus atque antennis læte flavis, his perbrevibus. Long. corp. 1·50 millim.

Body oval, moderately convex, and moderately shining, finely and closely punctured, thickly clothed with golden hair, fusco-castaneous, with a median fascia and some spots on the elytra red. *Head* yellow; eyes small; antennæ very short, bright yellow. *Thorax* large, moderately reflexed and ovally rounded, but not attenuated in front, rufescent, more or less clouded on the disc, finely and closely punctured, with the interstices smooth and shining; basal line rather deep; basal margin sinuated, with the angles rectangular. *Scutellum* rather small, rounded. *Elytra* scarcely broader but more than one half longer than the thorax, widest near the shoulders, not attenuated posteriorly; finely and very closely punctured, the interstices smooth and shining; fusco-castaneous, with a broad, red, transverse fascia near the middle, and red markings on the shoulders and posterior extremities; sutural stria indistinct; sides slightly margined; extremities very broad and very little rounded. *Abdomen* with the pygidium exposed and rufous. *Legs* moderate, bright yellow. *Underparts* rufescent, with the metasternum dusky.

Hab. PANAMA, Bugaba, Tolé (*Champion*).

Differs from *S. oberthüri* in its smaller size, broader and more depressed form, much broader and not attenuated thorax, and finer and closer sculpture.

3. **Sacium latifasciatum,** sp. n.

Elongato-ovale, convexum, nitidulum, pilis aureis modice vestitum, subtiliter punctatum, nigro-piceum, pronoto, macula humerali atque fascia lata, transversa, pone media elytrorum, rufis; pronoto sat lato, antice ovate rotundato, late reflexo atque pellucido, rufo plus minusve in disco obscurato, minute et confertim punctato, interstitiis glabris, nitidis, linea basali distincta, margine basali sinuata angulis rectis; elytris nigro-piceis, macula ad basin utriusque atque fascia lata communi pone media, rufis, quam pronotum vix latioribus, plus quam sesqui-longioribus, ad humeros latissimis, postice attenuatis, leviter et confertim punctatis, interstitiis glabris, nitidis, stria suturali indistincta, lateribus leviter marginatis, apicibus angustatis, leviter rotundatis; abdomine longius exserto, piceo; pedibus longis, læte flavis; antennis longis, obscure flavis, articulis 5° et 7° incrassatis. Long. corp. $\frac{1}{16}$ lin.=1·37 millim.

Body elongate-ovate, convex, rather shining, moderately clothed with golden hair, moderately punctured, nigro-piceous, with the thorax, a spot near the shoulder, and a very broad fascia beyond the middle of the elytra, red. *Head* small, castaneous; eyes small; antennæ long, dusky yellow, with the fifth and seventh joints incrassated. *Thorax* rather broad, ovately rounded, broadly reflexed and pellucid in front, red, with the disc more or less dusky, minutely and closely punctured, with the interstices smooth and shining; basal line distinct; basal margin sinuated, with the angles rectangular. *Scutellum* moderate, obtusely triangular. *Elytra* nigro-piceous, with a spot at the base of each, and a very broad transverse fascia beyond the middle, red; scarcely broader but more than one half longer than the thorax, widest at the shoulders, rather attenuated posteriorly; lightly and closely punctured, with the interstices smooth and shining; sutural stria indistinct; sides slightly margined; extremities narrow and slightly rounded. *Abdomen* much exposed, piceous. *Legs* long, bright yellow. *Underparts* entirely castaneous.

Hab. MEXICO, Guanajuato (*coll. Sallé*). One example only.

Differs from other species of the genus in its narrow thorax, attenuated elytra, fine

sculpture, disposition and shape of the elytral markings, and the enlarged fifth joint of its antennæ.

M. Sallé has quite recently sent me an example of this species for examination.

4. **Sacium fenestratum.** (*S. ocellatum*, Tab. III. figg. 14, 14 *a*.)

Arthrolips fenestratus, Reitter, Verh. zool.-bot. Ges. Wien, xxvii. p. 193[1].
Sacium fenestratum, Reitter, Mittheil. Münch. ent. Ver. 1877, p. 126.

Elongato-ovale, modice convexum, nitidum, pilis brevibus aureis vestitum, rufo-piceum, pronoto plus minusve flavescente elytroque singulo pone medium macula circulari magna, atque ad apicem altera lunæformi flavescente notato; pronoto parvo, antice angustato, ad basin latissimo, leviter sed distincte punctato, interstitiis nitidis, ad basin linea impressa notato; elytris sat brevibus, quam pronotum latioribus et fere duplo longioribus, prope humeros latissimis, postice attenuatis, linea longitudinali profunda ad suturam utrinque impressis, apicibus rotundatis; abdomine exserto, flavescente; pedibus atque antennis læte flavis. Long. corp. $\frac{10\text{-}12}{16}$ lin.=1·25–1·50 millim.

Head yellow; antennæ moderate, bright yellow. *Thorax* more or less flavescent, small, rather narrowed in front, the sides faintly margined, finely and distinctly punctured, with an impressed line within the basal margin; basal margin sinuated, with the angles nearly rectangular. *Scutellum* testaceous, small and rounded. *Elytra* rather short, attenuated towards the apex, closely and rather deeply punctured, broader and nearly twice longer than the thorax, widest near the shoulders, with a deeply impressed line on each side of the suture; rufo-piceous, with a crescent-shaped mark within the apex, and a large round spot on the disc behind the middle, yellow; apex rounded. *Abdomen* more or less exposed, flavescent. *Legs* slender, bright yellow. *Underparts* pale castaneous or testaceous.

Hab. Mexico[1] (*Sallé*); Guatemala, Zapote, Chacoj in Vera Paz (*Champion*).

Differs from *S. oberthüri* and *S. latifasciatum* in its smaller size, more attenuated form, and also in colour and sculpture. From *S. mollinum*, Lec., this very pretty species is distinguished by its much larger size, longer thorax, finer and closer punctuation, and by the markings of the elytra. A specimen from Zapote is figured.

This insect is figured under the name of *S. ocellatum* on our Plate.

5. **Sacium mexicanum.**

Sericoderus mexicanus, Chevr. in litt.

Oblongum, modice convexum, nitidum, minutissime et remote punctatum, castaneum, vitta dilutiore in elytro utroque notatum; pronoto magno, antice ovaliter rotundato et reflexo, minutissime et remote punctato, interstitiis glabris, nitidis, linea basali profunda, margine basali sinuata angulis acutis; elytris quam pronotum haud latioribus, vix duplo longioribus, prope humeros latissimis, minutissime et sat confertim punctatis, interstitiis glabris, nitidis, lateribus marginatis, apicibus valde rotundatis; pygidio exserto, castaneo; pedibus rufescentibus. Long. corp. $\frac{9}{16}$ lin.=1·12 millim.

Body oblong, moderately convex, shining, very minutely and remotely punctured, castaneous, with a pale longitudinal vitta on each elytron. *Thorax* large, ovally rounded, and reflexed in front, very minutely and remotely punctured, with the interstices smooth and shining; basal line deep; basal margin sinuated, with the angles acute. *Scutellum* small, subtriangular. *Elytra* not broader, and scarcely twice longer than the thorax, widest near the shoulders, very minutely and closely punctured, with the interstices smooth and shining; sides margined; extremities much rounded. *Abdomen* with the pygidium exposed, rufescent. *Legs* rufescent.

Hab. Mexico (*coll. des Gozis*).

Differs from the allied forms in its minute sculpture and pale elytral vittæ.

In the collection of M. des Gozis there is a single example of this species, labelled "*Sericoderus mexicanus*, Chevr.;" but, as it is deeply imbedded in shellac, I am not able to say whether it belongs to this genus or to *Arthrolips*. In colour it closely resembles *A. subvittatus*, but in shape appears more like a *Sacium*.

6. **Sacium atrum.**

Sacium atrum, Reitter, Mittheil. Münch. ent. Ver. 1877, p. 126 [1].

Ovate, convex, shining, clothed with pale hair, black, with the anterior margin of the thorax yellow; *head* small, flavescent; *thorax* small, black, with the anterior margin more or less flavescent, ovally rounded, reflexed and rather produced in front, moderately and rather closely punctured, the basal margin faintly sinuated and with the angles nearly rectangular; *elytra* black, broader and twice longer than the thorax, widest near the shoulders, attenuated posteriorly, moderately punctured, the epipleural folds yellow; pygidium piceous; legs moderate, bright yellow; antennæ short, yellow, with the club piceous. Length 1·12 millim.

Hab. Mexico [1].

This species in colour closely resembles the black variety of *S. oberthüri*, from which it can only be distinguished by its narrower form, smaller size, and much finer and closer sculpture.

I am indebted to Dr. Dohrn of Stettin for the loan of the type specimen; the above description is taken from this example.

7. **Sacium marginatum,** sp. n.

Ovale, modice convexum, nitidum, pilis flavescentibus vestitum, distincte punctatum, piceum, pronoti marginibus flavis; pronoto lato, antice rotundato, ad basin latissimo, distincte et sat profunde punctato, interstitiis glabris, nitidis, margine anteriore flava, late reflexa, margine basali vix sinuata, leviter reflexa, angulis rectis; elytris quam pronotum sat latioribus et duplo longioribus, prope humeros latissimis, magis profunde punctatis, apicibus valde rotundatis, dilutioribus; pedibus robustis, flavis; antennis obscurioribus. Long. corp. $\frac{8-9}{16}$ lin. = 1–1·12 millim.

Head ferruginous; antennæ dusky yellow, with the club darker. *Thorax* moderate, much rounded in front, piceous, with the margin broadly reflexed, bright yellow, widest at the base, rather deeply and distinctly punctured, with the interstices smooth and shining; basal margin slightly reflexed and faintly sinuated, with the angles rectangular. *Scutellum* rather large, rounded, deeply punctured. *Elytra* moderate, piceous, rather broader and twice longer than the thorax, widest near the shoulders, rather more deeply punctured than the thorax, slightly narrowed towards the apex, the apex pale and much rounded. *Abdomen* ferruginous. *Legs* robust, bright yellow. *Underparts* distinctly punctured, piceous, with the edges of the ventral segments pale.

Hab. Guatemala, Capetillo and Dueñas (*Champion*).

Rare. Differs from the foregoing species in its smaller size, more rounded form, broadly reflexed margin of the thorax, robust legs, and deeper sculpture.

8. **Sacium collare,** sp. n.

Ovale, sat obtusum, modice convexum, nitidissimum, pilis flavescentibus dense vestitum, castaneum, pronoto flavescente; pronoto modico semiovali, ad basin latissimo, minute sed distincte punctato, interstitiis

glabris, nitidis, fronte et lateribus leviter marginatis, et levissime reflexis, margine basali leviter bisinuata angulis fere rectis; elytris sat brevibus, quam pronotum haud latioribus fere sesqui-longioribus, prope humeros latissimis, minute sed distinctissime punctatis, interstitiis glabris, nitidis, lateribus leviter marginatis, apicibus latis, valde rotundatis, dilutioribus; pedibus atque antennis sat brevibus, ferrugineis. Long. corp. $\frac{8-9}{16}$ lin.=1–1·12 millim.

Body oval, rather obtuse, moderately convex, very shining, thickly clothed with flavescent hair, castaneous, with the thorax flavescent. *Head* piceous; eyes moderate; antennæ rather short, ferruginous. *Thorax* moderate, semioval, widest at the base, minutely but distinctly punctured, with the interstices smooth and shining; front and sides slightly margined, and very slightly reflexed; basal margin faintly bisinuated, with the angles almost rectangular. *Scutellum* moderate, obtusely triangular. *Elytra* rather short, one half longer but not broader than the thorax, widest near the shoulders, minutely but very distinctly punctured, with the interstices smooth and shining; sides slightly margined; extremities broad and much rounded, paler. *Legs* rather short, ferruginous. *Underparts* castaneous.

Hab. Mexico, Teapa, Toxpam (*Sallé*).

Differs from *S. marginatum* in the small size and very slightly reflexed margins of its thorax, and in sculpture.

In M. Sallé's collection this species bears the MS. name of *S. collare*, Deyr.; but I believe that it has not yet been described.

9. **Sacium laticolle,** sp. n.

Elongatum, modice convexum, haud nitidum, pilis flavis vestitum, sat profunde punctatum, rufo-testaceum; pronoto magno, minute et remote punctato, interstitiis glabris, nitidis, margine anteriore sat late reflexa, linea impressa ad basin notato, margine basali leviter sinuata angulis rectis; elytris sat longis, sat angustis, quam pronotum parum angustioribus, sesqui-longioribus, ad humeros latissimis, postice attenuatis, quam pronotum magis confertim et magis profunde punctatis, lateribus rectis, apicibus obtuse rotundatis; pedibus atque antennis flavis. Long. corp. $\frac{6}{16}$ lin.=0·75 millim.

Head testaceous; antennæ moderate, yellow. *Thorax* large, minutely and distantly punctured, with the interstices smooth and shining; anterior margin rather broadly reflexed, marked with an impressed line at the base; basal margin faintly sinuated, with the angles rectangular. *Scutellum* small, rounded. *Elytra* rather long and narrow, half as long again but narrower than the thorax, widest at the shoulders, attenuated posteriorly, more closely and more deeply punctured than the thorax; sides straight; apex obtusely rounded. *Abdomen* slightly exposed, testaceous. *Legs* moderate, yellow. *Underparts* rufo-ferruginous, rather deeply punctured.

Hab. Guatemala, El Reposo (*Champion*). A single example.

Differs from other species of the genus in its small size, large thorax, and narrow linear elytra.

ARTHROLIPS.

Arthrolips, Wollaston, Ins. Mader. p. 475 (1854).

Body generally oval, pubescent, the underside convex. *Head* wholly concealed. *Thorax* with the front margin entire, the hinder angles not produced. *Elytra* rather long, generally broad, much rounded at the extremities. *Antennæ* generally short, 10-jointed, the club much incrassate. *Palpi*: *maxillary* 4-jointed—2 very large, 4 long, robust, obtusely conical; *labial* very large, turgidly incrassate, 3-jointed—1 very minute, 2 very broad and short, deeply excavated at the apex, 3 longer than 2, obtusely conical, very broad at the base. *Mentum* quadrate. *Labium* very long, oblong, with very strong lateral costæ terminating in long and very acute paraglossal processes. *Lingua* long, deeply bifid, ciliated at the points. *Labrum* transversely oval, faintly emarginate. *Maxillæ* unilobed, the lobe very large, robust, very strongly

hooked, armed with three long and very sharp teeth. *Mandibles* small, armed with four robust and very sharp teeth. *Prosternum* very short, elevated between the coxæ, and broadly dilated posteriorly; *epimera* very narrow, enclosing the coxal cavities. *Mesosternum* short; *episterna* large; *epimera* not extending to the coxal cavities. *Metasternum* moderate, transverse, not extending to the sides of the body; *episterna* long and broad; *epimera* concealed. *Venter* composed of six segments, the first very long. *Legs* pubescent: *anterior* with the trochanters small, triangular; femora robust; tibiæ simple, dilated anteriorly; tarsi rather long and robust, 4-jointed—1 long and simple, 2 and 3 very small, simple, 4 long; claws moderate, convergent, with an obtuse denticulation below near the base; *intermediate* similar to the anterior, but rather longer; *posterior* similar to the preceding, but longer and more robust, with the inner angle of the trochanters elongate and acute, and the outer edge of the tibiæ minutely denticulate near the apex.

It is difficult to distinguish this genus from *Sacium*: the shorter and broader form of many of its species generally affords the best clue to their separation. The short 10-jointed antennæ form the only conspicuous anatomical difference; the shape of the labrum and of the labial palpi is also very diverse, but it is almost impossible to make any use of organs of such infinitesimal proportions.

In my descriptions of these older genera I have given their anatomical details at greater length than may be considered absolutely necessary, but they appear to me to have hitherto been imperfectly noticed.

Several species of this genus have been described from Europe, Madeira, Peru, &c.

The most obvious characters of the five Central-American species are as follows:—

Elytra variegated . . . . . *dimidiatus*.
Elytra not variegated.
  Thorax rufescent . . . . . *misellus*.
  Thorax and elytra concolorous.
    Legs testaceous . . . . . *ovatus*.
    Legs piceous.
      Pubescence golden . . . . . *niger*.
      Pubescence black . . . . . *hirsutus*.

1. **Arthrolips dimidiatus,** sp. n.

Oblongus, modice convexus, nitidus, subtiliter punctatus, pilis aureis vestitus, pronoto rufo, elytris antice obscure castaneis, postice late rufis; pronoto magno, antice circulariter rotundato et modice reflexo, leviter punctato, interstitiis glabris, nitidis, linea basali leviter impressa, margine basali sinuata angulis acutis; elytris quam pronotum vix latioribus, plus quam sesqui-longioribus, prope humeros latissimis, leviter et remote punctatis, interstitiis glabris, nitidis, dimidio basali obscure castaneo, posteriore læte rufo, lateribus marginatis, apicibus latis, leviter rotundatis; pedibus robustis, sat brevibus, læte flavis; antennis flavis, clavis obscurioribus. Long. corp. 1·12–1·25 millim.

Body oblong, moderately convex, shining, rather finely punctured, clothed with golden hair, the thorax red, the elytra with their basal half dark castaneous and their apical half bright red, sometimes dusky near the middle of the apical half. *Head* large, yellow; eyes large, very prominent; antennæ yellow, with the club dusky. *Thorax* large, circularly rounded and moderately reflexed in front, lightly punctured, with the interstices smooth and shining; basal line faint; basal margin sinuated, with the angles acute. *Scutellum* large, rounded. *Elytra* scarcely broader but more than one half longer than the thorax, widest near the shoulders; lightly and remotely punctured, with the interstices smooth and shining; the basal half dark castaneous, the apical half light red, sometimes with an indistinct dusky mark across the middle of

the red half; sides margined; extremities broad, very slightly rounded. *Abdomen* with the pygidium exposed and flavescent. *Legs* rather short, robust, bright yellow. *Underparts* yellow; metasternum finely punctured.

Hab. Panama, Tolé (*Champion*).

Differs from others in its ornamental colour and finer sculpture. This species has the form and general appearance of a *Sacium*, and can only be distinguished from that genus by its 10-jointed antennæ.

2. **Arthrolips misellus.**

Sacium misellum, Lec. Proc. Ac. Phil. vi. p. 145 [1].

Oblongo-ovalis, modice convexus, confertim punctatus, nitidus, pilis brevissimis parce vestitus, piceus, pronoto plus minusve rufescente; pronoto parvo, sat confertim punctato, interstitiis nitidis, margine anteriore reflexa, pallida, margine basali fere recta angulis rectis; elytris quam pronotum multo latioribus et fere duplo longioribus, ante media latissimis, quam pronotum magis confertim et magis profunde punctatis, apicibus latissimis et anguste dilutioribus; pedibus atque antennis robustis, flavis. Long. corp. $\frac{8}{16}$ lin.= 1 millim.

Head flavescent; antennæ large, yellow. *Thorax* small, rather closely punctured, with the interstices shining; anterior margin reflexed, pale; basal margin nearly straight, with the angles rectangular. *Scutellum* rather large, rounded, and punctured. *Elytra* much broader and nearly twice longer than the thorax, widest before the middle, more closely and more deeply punctured than the thorax, the apex very broad and narrowly pale. *Abdomen* ferruginous. *Legs* robust, yellow. *Underparts* ferruginous, with the edges of the segments paler.

Hab. North America, United States [1].—Guatemala, San Gerónimo (*Champion*).

Differs from others in its smaller size, broader form, small thorax, and deep and close sculpture. The two specimens found by Mr. Champion in Guatemala are rather smaller than those from the United States; but in every other respect are perfectly similar.

3. **Arthrolips ovatus,** sp. n.

Late ovatus, modice convexus, nitidus, pilis flavescentibus dense vestitus, niger, fronte pronoti atque elytrorum apicibus translucide albidis; pronoto sat parvo, antice rotundato et modice elongato, modice et remote punctato, interstitiis glabris, nitidis, lateribus atque fronte modice reflexis et leviter marginatis, margine basali leviter sinuata angulis fere rectis; elytris quam pronotum parum latioribus, duplo longioribus, et magis profunde punctatis, ante media latissimis, apicibus latis, valde rotundatis, et late dilutioribus; pedibus atque antennis testaceis. Long. corp. $\frac{8}{16}$ lin.=1 millim.

Body broadly ovate, moderately convex, shining, densely clothed with flavescent hair, black, with the front of the thorax and extremities of the elytra translucent white. *Thorax* rather small, rounded and rather elongate in front, widest at the base; moderately and remotely punctured, with the interstices smooth and shining; sides and front moderately reflexed and slightly margined; basal margin faintly sinuated, with the angles nearly rectangular. *Scutellum* large, rounded, and punctured. *Elytra* rather broader, twice longer, and more deeply punctured than the thorax, widest before the middle; extremities broad, much rounded, and broadly pale. *Legs* and *antennæ* testaceous. *Underparts* testaceous.

Hab. Mexico, Toxpam (*Sallé*).

One example. Differs from *A. hirsutus* in its smaller thorax, with the sides and front

much less broadly reflexed, more deeply punctured elytra, flavescent pubescence, and pale legs and underparts.

4. **Arthrolips niger,** sp. n.

Ovatus, valde convexus, nitidus, pilis sat longis aureis vestitus, sat profunde sat sparse punctatus, aterrimus, pronoto antice albido translucido; pronoto parvo, antice angustato, leviter et remote punctato, interstitiis glabris, nitidissimis, margine anteriore modice reflexa, albida translucida, margine basali vix sinuata angulis fere rectis; elytris quam pronotum latioribus et duplo longioribus, ad media latissimis, postice attenuatis, nitidis, valde convexis, quam pronotum magis confertim et magis profunde punctatis, apicibus rotundatis, dilutioribus; abdomine longius exserto, nigro-piceo; pedibus robustis, piceis; antennarum articulis basalibus pallidis, clava obscuriore. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head piceous; antennæ with the basal joints pale, and the club dusky and much incrassated. *Thorax* small, narrowed in front, lightly and remotely punctured, with the interstices smooth and shining; anterior margin moderately reflexed, transparent white; basal margin scarcely sinuated, with the angles nearly rectangular. *Scutellum* very small, rounded, and punctured. *Elytra* broader and twice longer than the thorax, widest at the middle, attenuated posteriorly, very convex and shining, more closely and more deeply punctured than the thorax, the apex rounded and pale. *Abdomen* much exposed, pitchy-black. *Legs* robust, piceous. *Underparts* piceous, with the edges of the segments broadly ferruginous.

Hab. PANAMA, Bugaba (*Champion*). One specimen only.

Differs from the other species of the genus in its small size, ovate and posteriorly attenuated form, very convex and shining surface, deep black colour, and dark legs.

5. **Arthrolips hirsutus,** sp. n. (Tab. III. fig. 18.)

Ovalis, sat latus, aterrimus, convexus, nitidus, remote punctatus, pilis elongatis suberectis, nigris, sæpe abrasis, parce vestitus; pronoto sat magno, ad basin latissimo, modice et remote punctato, interstitiis glabris, nitidissimis, margine anteriore late reflexa, dilutissime translucida, margine basali leviter sinuata angulis fere rectis; elytris latis, convexissimis, quam pronotum latioribus et plus quam sesqui-longioribus, prope media latissimis, magis leviter magisque remote punctatis, lateribus marginatis, apicibus valde rotundatis, anguste dilutioribus; antennis atque pedibus robustis, piceis. Long. corp. $\frac{7-10}{16}$ lin.=·87—1·25 millim.

Head ferruginous; antennæ rather large, piceous. *Thorax* rather large, widest at the base, moderately and remotely punctured, with the interstices smooth and very shining; anterior margin broadly reflexed, very pale and transparent; basal margin slightly sinuated, with the angles nearly rectangular. *Scutellum* moderate, rounded, and punctured. *Elytra* clothed with long suberect black hairs (which are often more or less rubbed off), broad, very convex, broader and more than half as long again as the thorax, widest near the middle, more faintly and more remotely punctured; sides margined; apex much rounded, narrowly pale. *Abdomen* slightly exposed, ferruginous. *Legs* robust, piceous. *Underparts* piceous, with the head, coxæ, and edges of the ventral segments ferruginous.

Hab. GUATEMALA, Tamahu, Senahu, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*).

This insect varies much in size, but is perfectly uniform in colour and sculpture. It differs from the allied species in its short, broad form, shining surface, and deep black colour; and in some examples by the long black hair on all parts of the body, but this covering of hair is often partially, and sometimes wholly, abraded.

SERICODERINA.

SERICODERUS.

Sericoderus, Stephens, Ill. Brit. Ent. Mand. ii. p. 188 (1829).

Body oval, often attenuated posteriorly, thickly clothed with sericeous pubescence. *Head* small, wholly concealed by the thorax. *Thorax* rather large, the anterior margin entire; hinder angles very much produced, embracing the shoulders of the elytra. *Scutellum* large, rounded at the apex. *Elytra* slightly truncate. *Abdomen* often much exposed. *Antennæ* geniculate, 11-jointed—1 very long, much recurved, 2 about half as long as 1, incrassate, 3 and 4 very minute, 5 rather larger than 4, 6 very minute, 7 and 8 much larger, nearly equal to each other, 9–11 forming a subfoliate club. (This description, in which the relative size of the joints is taken from *S. latus*, will not equally apply to other species.) *Palpi*: *maxillary* large, 4-jointed—1 very small, 2 very large, turgidly incrassate, pyriform, truncate at the apex, 3 small, oblong, 4 rather longer than 3, obtusely conical; *labial* moderate, 3-jointed—1 very small, 2 large, widest at the apex, the apex obliquely truncate, 3 short, transverse, with the apex rounded at the sides and faintly emarginate in the middle. *Mentum* large, subquadrate, widest at the base, the basal angles much rounded. *Labium* short and broad, rounded anteriorly, produced between the palpi, and bifid at the apex. *Lingua* broad, transverse, extending beyond the outer sides of the palpi. *Labrum* small, transverse, faintly emarginate in front, furnished anteriorly with a few long setæ. *Mandibles* small, rather narrow, armed at the apex with several sharp teeth. *Maxillæ* unilobed; lobe long and slender, armed at the apex with long and very sharp teeth. *Prosternum* very small, elevated between the coxæ and produced and dilated beyond them; *episterna* very minute; *epimera* moderate, enclosing the coxal cavities; coxal cavities oval. *Mesosternum* rather short; *episterna* large and broad; *epimera* large, not extending to the coxal cavities; coxal cavities rather small, moderately distant. *Metasternum* moderate, transverse, not extending to the sides of the body, the hinder margin between the coxæ nearly straight; *episterna* as long as the metasternum; *epimera* rather large, extending slightly beyond the metasternum; coxal cavities long and narrow, reaching to the sides of the body, rather remote from each other. *Venter* composed of six segments—1 very long, as long as the metasternum, 2–6 nearly equal to each other in length, the apical segment sometimes elongate. *Legs* rather long and slender: *anterior* with the trochanters very small; femora moderate; tibiæ slender; tarsi long and slender, 4-jointed—1–3 almost equal, simple, 4 longer than the others; claws very slender, faintly curved; *intermediate* much longer than the anterior, in other respects similar; *posterior* similar to the intermediate, but rather longer. *Coxæ*: *anterior* rather prominent, nearly contingent; *intermediate* moderately distant; *posterior* rather remote, long and narrow.

Sericoderus is easily known by the long and very acute posterior angles of the thorax, which, as in many of the Trichopterygidæ, embrace the shoulders of the elytra; and also by the silky pubescence, which usually covers the whole upper surface. But the species are difficult to distinguish from each other, as their chief diagnostic characters consist in the relative proportions of the joints of the antennæ, and in the general outline and size of the body. The former of these characters can only be discovered by the tedious process of extending the antennæ; and the latter is of its very nature comparative, and by no means obvious, when only a single species can be examined.

Six species of this widely distributed genus have been described.

1. **Sericoderus latus,** sp. n.

Suboblongus, valde convexus, nitidus, obscure ferrugineus, pronoto dilutiore, pilis aureis sat dense vestitus; pronoto brevi, antice sat attenuato, haud semicirculari, ad basin latissimo, flavescente, nitido, indistincte punctato, margine anteriore leviter reflexa, margine basali profunde sinuata angulis acutis valde productis; elytris postice sat attenuatis, quam pronotum sesqui-longioribus, haud latioribus, ad humeros latissimis,

ordinibus transversis fere rectis modice sed confertim asperatis, linea ad suturam utrinque impressis, apicibus rotundatis; abdomine longius exserto, obtuso, dilutiore; pedibus sat longis, gracilibus, flavis; antennis modicis, flavis, clava sat magna obscuriore. Long. corp. $\frac{8-9}{16}$ lin.=1–1·12 millim.

Head moderate, narrow; eyes prominent; antennæ inserted rather far from the eyes. *Thoraæ* short, rather attenuated in front, not semicircular, widest at the base, flavescent and shining, indistinctly punctured; anterior margin slightly reflexed; basal margin deeply sinuated and much produced towards the scutellum, with the angles acute and very much produced. *Scutellum* moderate, rounded, and faintly asperate. *Elytra* rather attenuated posteriorly, not wider than but half as long again as the thorax, widest at the shoulders, moderately but closely asperate in straight transverse rows, with an impressed line on each side of the suture, the apex rounded. *Abdomen* considerably exserted, obtuse and paler. *Legs* yellow, rather long and slender. *Underparts* ferruginous, with the venter paler.

Hab. GUATEMALA, Panajachel (*Champion*).—EUROPE (*coll. Matthews*).

One specimen. Differs from other species of the genus in its rather larger size, broader and more oblong form, short and anteriorly attenuated thorax, and in the form of the antennæ.

Obs. This insect agrees in all respects with a European species which I have separated from *S. lateralis*, Gyll.; from this latter it is distinguished by its larger size and broader form, and especially by the diverse proportions of the joints of the antennæ, and the anteriorly attenuated thorax.

CORYLOPHINA.

Hinder angles of the thorax very acute; antennæ 10-jointed . . . . . MICRÖUM.
Hinder angles of the thorax obtuse; antennæ 11-jointed . . . . . . CORYLOPHODES.

MICRÖUM *, gen. nov.

Corpus perfecte ovatum, validissime convexum. *Caput* totum obtectum; oculis magnis, prominentibus. *Pronotum* modicum, margine anteriore integra, margine basali fortiter sinuata angulis valde acutis. *Elytra* ovata, integra, subtus late inflexa. *Antennæ* leviter geniculatæ, articulis decem compositæ, duobus basalibus magnis, tribus sequentibus minutis, sexto valde elongato, septimo minuto, tribus ultimis valde incrassatis, clavam subfoliatam formantibus. *Prosternum* parvum, inter coxas parum elevatum; episternis exiguis; epimeris sat magnis; receptacula coxarum late complexis. *Mesosternum* breve; episternis sat parvis; epimeris longis ad coxas extensis; receptaculis coxarum sat distantibus. *Metasternum* modicum, transversum, ad latera corporis haud extensum, margine posteriore inter coxas recta; episternis permagnis, latis. *Venter* segmentis sex compositus, primo permagno, reliquis inter se paribus. *Pedes* robusti; tarsi articulis quatuor compositi, duobus basalibus sat magnis, longe bilobatis, et ciliatis, tertio parvo, apicali longo unguibus robustis denticulatis armato. *Coxæ*: *anteriores* approximatæ; *intermediæ* sat distantes; *posteriores* sat remotæ, longæ, angustæ, ad latera corporis non extensæ.

Body perfectly ovate, exceedingly convex. *Head* moderate, wholly covered by the thorax; eyes large and prominent; mouth very prominent; antennæ inserted near the eyes. *Thorax* moderate; anterior margin entire; basal margin sinuated, with the angles very acute, scarcely produced. *Scutellum* long and rounded. *Elytra* entire. *Antennæ* faintly geniculated, 10-jointed—1 very long, robust, and recurved, 2 much shorter, incrassate, 3, 4, 5 very minute, transverse, 6 as long as the preceding three united, but not wider, 7 very minute, 8–10 much incrassate, forming a subfoliate club, furnished with short hairs, 10 oval, larger than 9. (Parts of the mouth not dissected, apparently normal.) *Prosternum* small, slightly elevated between the

* *μικρὸς*, small *ὠὸν*, an egg.

coxæ; *episterna* very minute; *epimera* rather large, broadly enclosing the coxal cavities; prosternum not produced beyond the coxæ; coxal cavities oval. *Mesosternum* very short; *episterna* rather small; *epimera* large and long, extending to the coxal cavities; coxæ round, rather large. *Metasternum* moderate, transverse, not extending to the sides of the body, the hinder margin straight between the coxæ; *episterna* very large and broad, extending beyond the metasternum; *epimera* long, concealed by the elytra; coxal cavities very long and narrow, not quite reaching to the sides of the body. *Venter* composed of six segments—1 very long, nearly as long as the metasternum, 2–6 nearly equal to each other in length, the apical segment rather pointed, simple. *Legs*: *anterior* with the trochanters very large, oblong, produced beyond the femora, and abruptly truncate at the apex; femora long, robust, not incrassate, strongly margined on both sides; tibiæ shorter than the femora, robust, much dilated towards the apex, with the outer margin finely serrate; tarsi 4-jointed—1 and 2 large, very deeply bilobed and setose, 3 very small, 4 long and slender; claws strong, unidentate beneath; *intermediate* much longer than the anterior, with the tibiæ sinuate, in other respects similar; *posterior* similar to the preceding, but with the tibiæ ciliate, and armed with short spurs. *Coxæ*: *anterior* approximate; *intermediate* moderately distant; *posterior* rather remote, very long and narrow, nearly reaching to the sides of the body.

In the shape of the hinder angles of the thorax *Micröum* exhibits an affinity to the 'Sericoderina,' but in every other respect of form and structure resembles the 'Corylophina.' From *Corylophodes* it differs in having 10-jointed antennæ, the sixth joint of which is very long, but scarcely incrassated; also by the acute and slightly produced angles of the thorax, and by the epimera of the mesosternum reaching to the coxal cavities.

The single species now described is from Guatemala.

1. **Micröum ovoforme**, sp. n.

Late ovatum, validissime convexum, nitidum, rufo-castaneum, pilis minutis parce vestitum; pronoto modico, antice valde rotundato, levissime alutaceo, margine anteriore rotundata et marginata, haud reflexa, margine basali scutellum versus producta angulis valde acutis; elytris sat longis, quam pronotum vix latioribus, sed plus quam duplo longioribus, ad media latissimis, punctis umbilicatis regulariter et eleganter impressis, interstitiis alutaceis, lateribus leviter marginatis; pedibus robustis, rufo-piceis, articulis basalibus tarsorum dilatatis; antennis modicis, rufo-castaneis. Long. corp. $\frac{10}{16}$ lin. = 1·25 millim.

Head moderate, castaneous; eyes moderate, prominent. *Thorax* moderate, much rounded in front, widest at the base, delicately alutaceous; anterior margin margined, but not reflexed; basal margin produced towards the scutellum, with the angles very acute and slightly produced. *Scutellum* rounded, impunctate. *Elytra* rather long, scarcely broader but more than twice longer than the thorax, widest at the middle; regularly and elegantly marked with umbilicated punctures, with the interstices alutaceous; sides slightly margined; apex rather acute. *Legs* robust, rufo-piceous, with the basal joints of the tarsi dilated. *Underparts* castaneous, with a deeply impressed longitudinal line on the first ventral segment not extending to either margin.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*). One specimen.

This distinct species is easily recognized by its very convex and entirely ovate form, and by the elegant sculpture of the elytra.

CORYLOPHODES.

Corylophodes, Matthews, Ent. Monthly Mag. xxii. p. 160 (1885).

Body more or less hemispheric, generally smooth and very shining. *Head* small, completely covered by the front of the thorax; eyes often large and prominent; antennæ generally short, 11-jointed—1 very long

and large, slightly recurved, 2 large, but smaller than 1, 3 slender, shorter than 2, 4–8 very small, transverse, 9–11 forming a much incrassated, subfoliate club. *Thorax* small, widest at the base, and circularly or ovally rounded in front; anterior margin more or less broadly reflexed; basal margin generally sinuated, with the angles not produced. *Scutellum* generally small and rounded. *Elytra* large, entire, much broader than the thorax. *Legs* generally short; tibiæ sometimes flattened; tarsi 4-jointed —1 and 2 nearly equal, 3 very minute, 4 elongate and slender; claws faintly incurved. *Venter* composed of six segments, of which the basal one is nearly equal in length to the other five.

This genus contains numerous species from North and Central America and the Sandwich Islands. It is separated from *Corylophus* by the 11- (not 9-) jointed antennæ and other characters.

The five Central-American species (briefly noticed, *op. cit.* p. 161) may be separated from each other by the following characters:—

Body hemispheric.	
Size large; legs piceous	*championi.*
Size small; legs yellow	*jansoni.*
Body more or less ovate.	
Surface almost smooth	*torquatus.*
Surface rather deeply punctured	*castaneus.*
Body almost orbicular	*orbicularis.*

1. **Corylophodes championi,** sp. n. (Tab. III. figg. 19, 19 *a–c.*)

Hemisphæricus, glaberrimus, nitidissimus, aterrimus, margine reflexa pronoti albida translucida; pronoto parvo, vix evidenter punctato, margine anteriore modice reflexa, margine basali fortiter sinuata angulis rectis; elytris quam pronotum multo latioribus, duplo longioribus, ad media latissimis, fere impunctatis; pedibus atque antennis piceo-ferrugineis. Long. corp. $\frac{1}{16}^{2}$ lin. = 1·50 millim.

Head flavescent; antennæ pale yellow. *Thorax* small, scarcely perceptibly punctured; anterior margin moderately reflexed, transparent white; basal margin strongly sinuated, with the angles rectangular. *Scutellum* moderate, short, and rounded. *Elytra* much broader and twice longer than the thorax, widest at the middle, almost impunctate. *Legs* moderate, piceous. *Underparts* piceous, with a deep longitudinal impression on the metasternum, and a smaller impression on the first ventral segment.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Differs from other species of the genus in its large size, hemispherical form, smooth and almost impunctate surface, and deep black colour. I have named this fine species, the largest of its genus yet discovered, after its captor, in recognition of the service he has rendered to entomology in the pursuit of members of this difficult and interesting Family.

2. **Corylophodes jansoni,** sp. n.

Hemisphæricus, glaberrimus, nitidissimus, modice punctatus, aterrimus, pronoti margine anteriore late translucida; pronoto parvo, antice valde rotundato, modice punctato, interstitiis glaberrimis, nitidissimis, margine anteriore late reflexa, late translucida, margine basali ad scutellum longius producta angulis fere rectis; elytris quam pronotum latioribus et plus quam sesqui-longioribus, ante media latissimis, validissime convexis, modice punctatis, interstitiis glabris, nitidis, lateribus marginatis; pedibus atque antennis læte flavis. Long. corp. $\frac{1}{2}$ lin. = 1 millim.

Head rufo-testaceous; antennæ long, bright yellow. *Thorax* small, much rounded in front; moderately punctured, with the interstices very smooth and shining; anterior margin broadly reflexed and broadly transparent; basal margin much produced towards the scutellum, with the angles nearly rectangular. *Scutellum* small and rounded. *Elytra* half as long again and broader than the thorax, widest before the middle, exceedingly convex; moderately punctured, with the interstices smooth and shining; sides margined. *Legs* moderate, bright yellow. *Underparts* rufo-testaceous.

Hab. NICARAGUA, Chontales (*Janson*).

This species is distinguished by its small size, exceedingly convex form, deep black colour, and bright yellow legs and antennæ.

3. **Corylophodes torquatus,** sp. n.

Subhemisphæricus, glaberrimus, nitidissimus, leviter punctatus, aterrimus, pronoti margine anteriore late translucide albida; pronoto parvo, antice valde rotundato, minute et levissime punctato, interstitiis glabris, nitidissimis, margine anteriore late reflexa, albida valde translucida, margine basali modice sinuata, angulis fere rectis; elytris quam pronotum latioribus et plus quam sesqui-longioribus, ad media latissimis, sat profunde et remote punctatis, interstitiis glabris, nitidissimis, lateribus late marginatis; antennis pallide flavis, clava obscura; pedibus flavis, femoribus obscuratis. Long. corp. $\frac{10}{16}$ lin.= 1·25 millim.

Head pitchy-testaceous; palpi large; antennæ large, pale yellow, with the club much incrassated, dusky. *Thorax* small, much rounded in front; minutely and faintly punctured, with the interstices smooth and shining; anterior margin broadly reflexed, white, and very transparent; basal margin moderately sinuated, with the angles nearly rectangular. *Scutellum* rather large, triangular, impunctate. *Elytra* wider than and more than half as long again as the thorax, widest at the middle; remotely punctured, with the interstices smooth and very shining; sides broadly margined. *Legs* yellow, with the femora dusky. *Underparts* black, the metasternum not depressed.

Hab. GUATEMALA, Zapote, Senahu (*Champion*).

Differs from *C. championi* in its smaller size and narrower form, and in the broader margin and deeper sculpture of the elytra, and uniform white margin of the thorax.

4. **Corylophodes castaneus,** sp. n.

Late ovatus, postice angustatus, convexissimus, profunde et distincte punctatus, rufo-castaneus, margine anteriore pronoti dilutiore; pronoto parvo, antice rotundato, minutissime punctato, interstitiis glabris, nitidissimis, margine anteriore reflexa dilutiore, margine basali ad scutellum valde producta angulis sat obtusis; elytris quam pronotum latioribus et sesqui-longioribus, ante media latissimis, postice sat attenuatis, validissime convexis, profunde punctatis, interstitiis nitidis, et leviter alutaceis, lateribus marginatis; pedibus atque antennis pallide flavis. Long. corp. $\frac{9}{16}$ lin.=1·12 millim.

Head flavescent; antennæ pale yellow. *Thorax* small, rounded in front; very minutely punctured, with the interstices smooth and shining; anterior margin reflexed and pale; basal margin much produced towards the scutellum, with the angles rather obtuse. *Scutellum* obtusely triangular. *Elytra* broader than and half as long again as the thorax, widest before the middle, rather attenuated posteriorly, exceedingly convex; deeply punctured, with the interstices shining and faintly alutaceous; sides margined. *Legs* pale yellow. *Underparts* pale testaceous.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Differs from *C. torquatus* in its narrower and more ovate form and deeper sculpture.

5. **Corylophodes orbicularis,** sp. n.

Fere orbicularis, aterrimus, nitidissimus, impunctatus; pronoto brevi, antice circulariter rotundato, margine anteriore translucida, modice reflexa, margine basali ad scutellum valde producta, angulis fere rectis; elytris brevibus, quam pronotum sat longioribus, parum latioribus, prope humeros latissimis, lateribus late marginatis, marginibus piceis; pedibus atque antennis testaceis, his clava obscuriore. Long. corp. $\frac{7}{16}$ lin. =0·87 millim.

Head rufo-castaneous; antennæ testaceous, with the club dusky. *Thorax* short; circularly rounded in front, with the anterior margin moderately reflexed and transparent; basal margin much produced towards the scutellum, with its angles almost rectangular. *Scutellum* broad, triangular. *Elytra* short, rather longer and slightly broader than the thorax, widest near the shoulders; sides broadly margined, with the margin piceous. *Legs* testaceous, with the three basal joints of the tarsi very large, and the last joint very long and slender. *Underparts* dark castaneous.

Hab. British Honduras, Belize (*Blancaneaux*).

Differs from the other allied species in its small size, orbicular form, and glabrous impunctate surface.

ORTHOPERINA.

Thorax considerably excised in front	Orthoperus.
Thorax not excised in front	Rhypobius.

ORTHOPERUS.

Orthoperus, Stephens, Ill. Brit. Ent., Mand. ii. p. 186 (1829).

Body oval or ovate, usually very convex. *Head* partly exposed, moderate; eyes small; antennæ inserted before and above the eyes. *Thorax* small, transverse, faintly excavated in front, the hinder angles not produced. *Scutellum* small, more or less triangular. *Elytra* entire; rounded, or semiovate. *Wings* very large. *Antennæ* geniculate; 9-jointed—1 and 2 very large and long, 1 recurved, 3 and 4 very small, 5 much larger than 4 or 6, 6 very small, 7–9 forming a moderately incrassated club. *Palpi*: *maxillary* large, 4-jointed—1 very small, 2 very large, ovate, 3 short, transverse, 4 large, rounded and much incrassated at the base, pointed and slightly incurved at the apex, clothed throughout with rather long hairs; *labial* large and very robust, 3-jointed—1 minute, 2 large and very robust, abruptly truncate at the apex, with several spur-like processes on the margin of the truncation, 3 minute, almost concealed within the truncate apex of 2. *Mentum* short, transverse, excavated anteriorly, the sides moderately rounded. *Labium* oblong, furnished at the apical extremity with long, erect, ovate paraglossal processes. *Lingua* large, apparently oblong. *Labrum* large and broad, rounded anteriorly, and strongly constricted towards the base. *Mandibles* very large and strong, much hooked and bifid at the point, furnished at the base with a large process which is obliquely truncate in front, and serrate on each edge. *Maxillæ* unilobed; lobe rather large, armed at the apex with several long and very sharp curved teeth. *Prosternum* very short, elevated between the coxæ, and prolonged in front and behind them, pointed anteriorly and dilated posteriorly; *episterna* small, but distinct; *epimera* moderate, narrowly enclosing the coxal cavities; coxal cavities narrow and elongate. *Mesosternum* very short; *episterna* large; *epimera* long and narrow, almost reaching to the coxal cavities; coxal cavities moderately distant, ovate, apparently furnished with trochantins. *Metasternum* moderate, not extending to the sides of the body, its posterior margin between the coxæ straight; *episterna* large and very broad; *epimera* long, extending beyond the metasternum, and much rounded at the extremity; coxal cavities rather large, pyriform, not extending to the sides of the body. *Venter* composed of six segments—1 long, 2–5 equal to each other in length, 6 longer than the preceding, simple. *Legs* generally long and slender: *anterior* with the trochanters small, triangular; femora moderate; tibiæ generally very long, and much incurved, sometimes uncinate; tarsi 4-jointed—1 rather long, 2 and 3 generally equal, 4 sometimes very long and slender; claws moderate, sometimes unidentate beneath;

intermediate with the trochanters longer, and the tibiæ much shorter than the anterior; *posterior* with the trochanters long and fusiform, in other respects similar to the intermediate. *Coxæ*: *anterior* nearly contingent, long and narrow; *intermediate* moderately distant; *posterior* rather remote.

This genus contains numerous species, all from Europe or North America. *Orthoperus* may be known by its rounded form and minute size; the 9-jointed and strongly geniculated antennæ; and by the long incurved anterior tibiæ of most of its species. Owing to their close resemblance to vegetable seeds the *Orthoperi* are often overlooked by collectors; and this may in great measure account for their apparent rarity. The four species contained in the present collection are all represented by single individuals; they are nevertheless abundantly distinct from each other, and may be separated thus:—

Surface distinctly punctured.	
Tibiæ yellow	*ovalis.*
Tibiæ pitchy black	*nigricans.*
Surface smooth.	
Legs pale	*ovatus.*
Legs black	*perpusillus.*

1. **Orthoperus ovalis,** sp. n.

Ovalis, validissime convexus, niger, nitidus, distinctissime et regulariter punctatus, pilis brevibus sparsissime indutus; pronoto sat parvo, ad basin latissimo, lateribus marginatis, marginibus dilutioribus, margine basali sinuata, linea levi intra marginem impressa, angulis fere rectis; elytris quam caput atque pronotum sesqui-longioribus sat latioribus, ad media latissimis, validissime convexis, magis profunde punctatis; pedibus atque antennis rufo-piceis, tarsis longioribus. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head very little exposed, moderate, shining; antennæ rufo-piceous. *Thorax* small, but rather long, widest at the base, distinctly and regularly punctured; sides margined, the margin pale, with an impressed line within the basal margin; basal margin sinuated, with the angles nearly rectangular. *Scutellum* very small, triangular. *Elytra* rather broader and half as long again as the head and thorax, widest at the middle, exceedingly convex; distinctly, regularly, and more deeply punctured than the thorax. *Legs* yellow, with the femora dusky; tarsi rather long. *Underparts* black, moderately and distinctly punctured.

Hab. Mexico, Jalapa (*Höge*). One specimen.

Differs from the following three species in its larger size, purely oval form, nigro-piceous colour, and rather deeply punctured elytra.

2. **Orthoperus nigricans,** sp. n.

Ovalis, convexus, nitidus, aterrimus, pilis brevibus remotis indutus, modice sed distincte punctatus; pronoto sat parvo, leviter marginato, margine basali vix sinuata, angulis fere rectis; elytris quam caput atque pronotum parum longioribus et latioribus atque magis profunde punctatis, prope media latissimis, apicibus rotundatis et parum dilutioribus; pedibus atque antennis nigro-piceis, tibiis anterioribus longis incurvatis. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head small, scarcely exserted; antennæ piceous. *Thorax* rather small, faintly margined; basal margin scarcely sinuated, with the angles nearly rectangular. *Scutellum* moderate, triangular. *Elytra* rather longer and

broader than the head and thorax, and more deeply punctured, widest near the middle, the apex rounded and rather paler. *Legs* moderate, pitchy-black, with the anterior tibiæ long and incurved.

Hab. GUATEMALA, near the city (*Champion*). One specimen.

Differs from the preceding species in its much smaller size, more rounded and less convex form, dark legs and antennæ, and black colour.

3. **Orthoperus ovatus,** sp. n.

Ovatus, validissime convexus, fere glaber, rufo-castaneus; pronoto sat longo, indistincte punctato, ad basin latissimo, margine basali leviter sinuata, angulis fere rectis; elytris quam caput atque pronotum parum latioribus et sesqui-longioribus, ante media latissimis, postice leviter attenuatis, apice sat acuto, dilutiore; pedibus atque antennis pallide ferrugineis. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head much exserted; eyes large; antennæ yellow, with the club dusky. *Thorax* rather long, indistinctly punctured, widest at the base; basal margin slightly sinuated, with the angles nearly rectangular. *Scutellum* very small, triangular. *Elytra* rather broader and half as long again as the head and thorax, widest before the middle, slightly attenuated posteriorly, the apex rather acute and paler. *Legs* moderate, pale ferruginous. *Underparts* piceous, with the venter paler.

Hab. GUATEMALA, San Gerónimo (*Champion*). One specimen.

Differs from all others of the genus in its very convex and narrow ovate form and rufo-castaneous colour.

4. **Orthoperus perpusillus,** sp. n.

Late ovalis, nigro-piceus, nitidissimus, fere impunctatus; capite parvo; oculis modicis, haud prominentibus; pronoto magno, ad basin latissimo, quam levissime alutaceo, lateribus marginatis, margine basali scutellum versus producta; elytris quam pronotum vix latioribus, duplo longioribus, ante media latissimis, quam levissime alutaceis, punctis minutissimis, remotis, striatim dispositis, impressis, lateribus marginatis, apicibus latis, valde rotundatis; pedibus longis, nigro-piceis, tarsis elongatis; antennis sat robustis, totis flavescentibus. Long. corp. $\frac{4}{16}$ lin.=0·50 millim.

Body broadly oval, pitchy-black, very shining, almost impunctate. *Head* small; eyes moderate, not prominent. *Thorax* large, widest at the base, very minutely alutaceous; sides margined; base produced towards the scutellum. *Scutellum* very small, triangular. *Elytra* scarcely broader but twice longer than the thorax, widest before the middle, very minutely alutaceous, marked with very minute remote punctures in longitudinal striæ; sides margined; extremities very broad, and much rounded. *Legs* long, pitchy-black; tarsi very long. *Antennæ* rather robust, entirely dusky yellow. *Underparts* pitchy-black.

Hab. MEXICO, Teapa (*Sallé*). One specimen.

This, the most minute of all the known species of *Orthoperus*, may be recognized by its exceedingly small size, broadly oval form, and pitchy-black legs.

RHYPOBIUS.

Rypobius, Leconte, Proc. Acad. Phil. vi. p. 142 (1852).
Rhypobius, Gemminger & Harold, Cat. xii. p. 3818.

Body ovate, exceedingly convex. *Head* rather large, covered, but not concealed, by the thorax, the parts of the mouth very prominent; eyes large and very prominent; antennæ inserted considerably in front of the eyes. *Thorax* large, its front margin entire, the extreme front sometimes straight, the hinder angles not produced. *Scutellum* rather large, rounded at the apex. *Elytra* entire, semiovate. *Wings* wanting. *Abdomen*

with the pygidium sometimes exposed. *Antennæ* geniculate, 11-jointed—1 very long and robust, much recurved, 2 ovate, more than one half shorter than 1, 3 small and slender, 4 very short, transverse, 5 more than twice as large as 4, 6 very short, transverse, 7 very large and much incrassated, as long as the four preceding joints united, 8 short, transverse, subtriangular, 9–11 forming a moderately incrassated club. *Palpi*: *maxillary* very large, 4-jointed—1 very small, 2 very long, and very large, subcylindrical, faintly incurved, rather widest near the base, 2 very short, transverse, 4 semioval, clothed with short hairs; *labial* large and robust, 3-jointed—1 very small, 2 large, rather pyriform, broadly truncate at the apex, 3 moderate, truncate, and furnished with short hairs at the apex. *Mentum* subquadrate, short, slightly rounded at the sides. *Labium* long and broad, rounded at the sides. *Lingua* moderate, subtriangular. *Labrum* small and short, ovally rounded in front. *Mandibles* linear, very long and slender, deeply bifid at the apex, with the points widely divergent and terminating in a very acute strong hook. *Maxillæ* unilobed; lobe very long and robust, very acute and simple at the apex. *Prosternum* very short, elevated between the coxæ, and much dilated behind them; *episterna* minute, scarcely perceptible; *epimera* very narrow, narrowly enclosing the coxal cavities; coxal cavities rather large, oval. *Mesosternum* very short; *episterna* rather small; *epimera* large and long, not extending to the coxal cavities; coxal cavities large, rounded, moderately distant. *Metasternum* rather short, not extending to the sides of the body; *episterna* large and broad, longer than the metasternum; *epimera* long, concealed by the elytra; coxal cavities large, pyriform, not reaching to the sides of the body, the margin of the metasternum straight between the coxæ. *Venter* composed of six segments—1 long, but scarcely as long as the metasternum, 2–6 nearly equal to each other in length, the apical segment simple. *Legs* long and very robust: *anterior* with the trochanters very small, triangular; femora robust; tibiæ generally more or less dilated; tarsi 4-jointed—1 and 2 large, broadly bilobed, and pilose, 3 exceedingly minute, 4 long and robust; claws rather long, unidentate beneath; *intermediate* similar to the anterior, but longer, with the tibiæ dilated before the apex; *posterior* similar to the intermediate, but longer, with the femora much more robust. *Coxæ*: *anterior* separated by the prosternum; *intermediate* moderately distant; *posterior* more widely separated than the intermediate.

Rhypobius resembles some of the Byrrhidæ in appearance, and is on that account easily recognizable. The sixth joint of the antennæ, and the third joint of the tarsi, can scarcely be discovered without the assistance of Canada balsam.

This genus was founded by Leconte upon a single species from Coney Island, and I have recently described another from Europe; a third inhabits Guatemala.

1. **Rhypobius guatemalensis,** sp. n.

Ovalis, validissime convexus, nitidissimus, castaneus; capite parvo, vix conspicuo; pronoto sat magno, leviter remoteque punctato, interstitiis leviter alutaceis, antice leviter excavato, lateribus circulariter rotundatis, leviter marginatis, margine basali leviter sinuata, scutellum versus parum producta, angulis acutis, parum productis; elytris modicis, quam caput atque pronotum longioribus vix latioribus, pone humeros latissimis, magis profunde punctatis, interstitiis alutaceis, lateribus leviter marginatis, apice obtuso; antennis longis, robustis atque pedibus flavis. Long. corp. $\frac{6}{16}$ lin.=0·75 millim.

Head very small, scarcely exserted; eyes small, not prominent; antennæ long and robust, yellow. *Thorax* rather large, faintly and distantly punctured, with the interstices faintly alutaceous, slightly excavated in front; sides circularly rounded and faintly margined; basal margin feebly sinuated, rather produced towards the scutellum, with the angles acute and slightly produced. *Scutellum* rather long, rounded. *Elytra* moderate, longer but not broader than the head and thorax, widest below the shoulders; more deeply punctured than the thorax, with the interstices more strongly alutaceous; sides slightly margined; apex obtuse. *Legs* moderate, yellow. *Underparts* castaneous.

Hab. GUATEMALA, near the city (*Champion*). One specimen.

Differs from *R. marinus*, Lec., in its much smaller size and perfectly oval form, and also in sculpture.

Fam. TRICHOPTERYGIDÆ *.

The Trichopterygidæ collected by Mr. Champion, and described in the following pages, form the most important collection of that family ever yet made by any single individual in a tropical country. It is not possible to praise too highly the perseverance and patient research expended in their pursuit, or the skill exhibited by Mr. Champion in their preservation. Throughout the whole of this numerous collection almost every specimen has been mounted in a manner which at once exhibits the characteristic differences of sculpture and outline so important in discrimination, and so difficult to display, a fact which every one who has made the attempt will readily confess.

The greater part of the known genera of Trichopterygidæ, and two previously unknown, are represented among Mr. Champion's captures. The species, of which twenty-seven were new to science, include many beautiful and interesting forms, and present every gradation of size from the microscopic *Ptilium hornianum* and *Nanosella fungi* up to *Trichopteryx godmani*, a species more than one half larger than any previously discovered. That so many of Mr. Champion's captures should belong to species then unknown cannot be at all surprising; such must ever be the case, when the Trichopterygidæ of an almost untried region are thus industriously hunted up, and while the study of a family so infinitely numerous and so generally distributed remains in its infancy.

It is quite possible that some of those I have treated as new species may have already been described by Motschulsky, who many years ago published [Bull. Mosc. xli. part 2, pp. 70 *et seq.* (1868)] an account of many Trichopterygidæ found by himself in Central America and elsewhere. But without types it is often impossible to recognize a species from his very short and imperfect descriptions. The death of Motschulsky was a serious loss to me, for nothing could exceed the kind liberality with which he would at all times supply types to assist a student; but since his collection has been placed in the Museum of Moscow the managers of that institution have persistently ignored my oft-repeated applications for the loan or exchange of types—a line of conduct unaccountable on the score of courtesy, and incompatible with the advancement of science.

I have already ["Synopsis of North-American Trichopterygidæ," Trans. Am. Ent. Soc. xi. pp. 113–156 (1884)] briefly described all the Central-American species known to me. To render, however, this work as complete as possible the descriptions are here given in full.

The genera known to me may be grouped as follows:—

Elytra truncate	**Trichopterygina.**
Elytra entire	**Ptiliina.**

* By A. Matthews.

TRICHOPTERYGINA.

Body elongate; abdomen much longer than the elytra.
- Thorax more or less constricted; posterior coxæ slightly laminated . . . . . PTINELLA.
- Thorax not constricted; posterior coxæ simple. . . . . CHAMPIONELLA.

Body more or less oblong; abdomen not much longer than the elytra.
- Thorax constricted near the base . . . . . PTERYCODES.
- Thorax not constricted.
  - Thorax with the posterior angles more or less produced . TRICHOPTERYX.
  - Thorax with the posterior angles not produced . . . . NEPHANES.

PTILIINA.

Base of the thorax incumbent on the shoulders of the elytra . . ACTIDIUM.

Base of the thorax fitted to the shoulders of the elytra.
- Body very convex and shining, not pubescent . . . . . PTENIDIUM.
- Body more or less pubescent.
  - Antennæ very short . . . . . NANOSELLA.
  - Antennæ long.
    - Thorax narrower than the elytra, with the hinder angles not produced . . . . . PTILIUM.
    - Thorax as broad as the elytra, with the hinder angles produced . . . . . THROSCIDIUM.

In describing the older genera of the Trichopterygidæ it will be unnecessary in the present work to enter into a detailed account of their anatomy, which, for the greater part, has been fully set forth in my 'Trichopterygia Illustrata.' The characters which I purpose chiefly to notice are those which subsequent investigations and a more matured knowledge of the subject have, since the publication of that work, enabled me to add to or to correct in the descriptions there given. These, it will be seen, consist wholly in the respective proportions of certain parts of the underside of the external skeleton; a subject formerly much neglected, but of late years brought prominently forward, and placed in the important position which it now holds, chiefly through the investigations of Dr. Leconte and Dr. Horn.

TRICHOPTERYGINA.

PTINELLA.

Ptinella, Motschulsky, Bull. Mosc. 1845, iv. p. 505; Matthews, Trich. Illustr. p. 164, t. 19 (1872).

Body elongate, slender, in life translucent. *Antennæ* 11-jointed, generally long and slender, ornamented with long hairs; club elongate, moniliform. *Head* prominent, rather large; eyes moderate, in some species deficient in the male sex. *Thorax* generally small, and more or less constricted near the base. *Scutellum* large, triangular. *Elytra* abbreviated, often very short, separately rounded at their extremities. *Abdomen*

very long, with the basal segments membranous. *Prosternum* large; *episterna* large, trigonal; *epimera* moderate, rather broadly enclosing the coxal cavities. *Mesosternum* moderate, not carinated; *episterna* very large; *epimera* very large and broad, extending to the coxal cavities. *Metasternum* rather short, transverse, extending to the sides of the body; *episterna* long, with their interior angle alone visible beyond the margin of the elytra; *epimera* very narrow and long, with their extremities visible beyond the metasternum. *Venter* composed of six nearly equal segments, with apical segment simple. *Legs* generally long and robust; coxæ faintly laminate; tibiæ generally armed with long spurs and setæ; tarsi 3-jointed, with the apical joint very long and slender.

The species of *Ptinella* are distinguished from the rest of the family by their elegant elongate shape, small and generally constricted thorax, and by the bright yellow or orange colour of the body; the latter in the female is more or less suffused with castaneous, and exhibits the wings in the form of longitudinal black vittæ beneath the transparent elytra. All are subcortical in their habits.

Numerous species of this genus are known from Europe, North America, Madeira, &c. The three Central-American species here enumerated are separated from each other by the following superficial characters:—

Integument coriaceous and flexible.
- Size rather large, form broad . . . . . *championana*.
- Size small, form narrow . . . . . *pellucida*.

Integument harder, and more corneous . . . . . *incerta*.

1. **Ptinella championana.** (Tab. III. fig. 22.)

Ptinella championana, Matth. Trans. Am. Ent. Soc. xi. p. 116[1].

Elongato-ovalis, depressa, sat nitida, flava, translucida, pilis brevissimis flavis vestita; capite magno, antice sat acuminato; oculis parvis, prominentibus; pronoto brevi, quam caput breviore sed parum latiore, ad medium latissimo, ad basin fortiter et abrupte constricto, tuberculis minutis remotis interstitiisque glabris, nitidis, ornato, interdum depressione lata indistincta in disco notato, lateribus marginatis, antice valde rotundatis, ad basin abrupte constrictis, margine basali fere recta, angulis acutis valde prominentibus; elytris brevibus, quam caput atque pronotum multo brevioribus et haud latioribus, prope media latissimis, ordinibus transversis remotis modice asperatis, interstitiis glabris, nitidis, apicibus rotundatis; abdomine longo, obtuso, segmentis quinque expositis, lateribus profunde marginatis; pedibus atque antennis modicis, flavis. Long. corp. $\frac{9}{16}$ lin.=1·12 millim.

Head large, convex, rather pointed in front, ornamented with minute remote tubercles; eyes small, rather prominent; antennæ moderate, yellow. *Thorax* short, shorter but rather broader than the head, widest at the middle, strongly and abruptly constricted near the base, ornamented with minute remote tubercles, with the interstices smooth and shining, occasionally with a broad indistinct depression on the disc; sides margined, much rounded in front, and constricted near the base; basal margin nearly straight, with the angles acute and very prominent. *Scutellum* large, triangular, deeply asperate. *Elytra* short, much shorter and not wider than the head and thorax, widest near the middle; moderately asperate in remote transverse rows, with the interstices smooth and shining; apex very much rounded. *Abdomen* long and obtuse, with five segments exposed, deeply margined at the sides. *Legs* moderate, yellow. *Underparts* wholly testaceous.

Hab. GUATEMALA, El Reposo 800 feet (*Champion*[1]).

Differs from the European *P. testacea* in its shorter and more abruptly constricted thorax, very short elytra, and shorter legs and antennæ.

Found in numbers under sappy bark in the low hot forest-region of the Pacific slope.

2. **Ptinella pellucida.**

Ptinella pellucida, Matth. Trans. Am. Ent. Soc. xi. p. 117 [1].

Sat lata et depressa, sat nitida, flava ♂, castanea ♀, pilis pallidis dense vestita; capite magno, antice rotundato, confertim tuberculato, oculis ♀ nigris prominentibus; pronoto breve transverso, quam caput multo breviore, haud latiore, tuberculis sat magnis confertissime obtecto, impressionibus duabus longitudinalibus in disco notato, lateribus marginatis et rotundatis, ad basin contractis, haud constrictis, margine basali recta, angulis rectis; elytris brevibus, quam caput atque pronotum nec longioribus nec latioribus, ad apices latissimis, ordinibus transversis sat profunde asperatis, interstitiis nitidis, apicibus valde rotundatis; abdominis segmentis quinque apertis segmento apicali sat acuto; pedibus atque antennis longis, robustis, flavis. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head very large, obtuse in front, closely tuberculate; eyes black, large and prominent in the female; antennæ long, very robust, yellow. *Thorax* small, transverse, much shorter and not wider than the head; covered with rather large tubercles in transverse rows, with the interstices rather deeply reticulate; sides rather strongly margined, much rounded, widest near the middle, contracted towards the base: basal margin nearly straight, with the angles rectangular; on the disc are two indistinct longitudinal impressions. *Scutellum* large, triangular, deeply asperate. *Elytra* short, not wider or longer than the head and thorax, widest at the apex; deeply asperate in almost straight transverse rows, with the interstices reticulate; sides margined and straight; apex broad and very much rounded. *Abdomen* rather broad, with five segments exserted, the terminal segment rather acute. *Legs* long, robust, yellow. *Underparts* wholly yellow.

♀ entirely castaneous, with the wings seen through the elytra as wide black vittæ.

Hab. GUATEMALA, San Gerónimo, Zapote (*Champion* [1]).

Differs from *P. flavidula*, Fairm., in its much smaller size, shorter thorax, and deeper sculpture; from *P. quercus*, Lec., in its larger size, more depressed form, and much deeper sculpture.

3. **Ptinella incerta.** (Tab. III. fig. 21.)

Ptinella incerta, Matth. Trans. Am. Ent. Soc. xi. p. 118 [1].

Elongata, angusta, convexa, obscure castanea, nitida, pilis brevissimis flavis parce vestita; capite sat longo, obtuso; oculis retro positis, sat magnis, prominentibus; pronoto parvo, quam caput parum latiore haud longiore, prope medium latissimo, basin versus fortiter constricto, tuberculis magnis confertim obtecto, depressionibus duabus ovalibus basin versus impresso, lateribus marginatis, antice rotundatis, postice constrictis, margine basali fere recta, angulis acutis, prominentibus; elytris longis, angustis, subparallelis, quam caput atque pronotum longioribus vix latioribus, nitidis, convexis, confertim et profunde asperatis, apicibus concoloribus valde rotundatis, extremis albidis; abdomine segmentis quatuor apertis, segmento apicali et parte majore præcedentis læte flavis, apicali acuminato; pedibus atque antennis longis, flavis. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head long, obtuse in front, closely and finely tuberculate, or alutaceous; eyes placed far back, rather large and prominent; antennæ long, dark yellow. *Thorax* small, rather wider but not longer than the head, widest near the middle, strongly constricted towards the base, closely covered with large tubercles, with two oval depressions near the base; sides margined, rounded in front, and much constricted towards the base; basal margin nearly straight, with the angles acute and prominent. *Scutellum* small, elongate triangular, deeply asperate. *Elytra* long and narrow, subparallel, longer but scarcely wider than the head and thorax, convex and shining, closely and deeply asperate; apex much rounded, with the extreme edge white. *Abdomen* with four segments exposed, the apical and the greater part of the penultimate segment bright yellow, the apex acuminate. *Legs* long, dark yellow. *Underparts* castaneous, with the mouth, coxæ, and greater part of the venter bright yellow.

Hab. GUATEMALA, San Gerónimo 3000 feet (*Champion* [1]).

Differs from the other species of the genus in its narrow subparallel convex form, strongly constricted thorax, dark castaneous colour, and deep sculpture.

Obs. I feel doubtful whether this insect is a true *Ptinella*; it differs very much from the more normal species in its convex and corneous integument, but, so far as I have been able to discover, does not present any anatomical difference.

CHAMPIONELLA.

Championella, Matthews, Trans. Am. Ent. Soc. xi. p. 118 (1884).

Antennæ 11-jointed—2 rather longer than 1, 3–7 nearly equal, 8 longer and somewhat incrassate, 9–11 incrassate, gradually increasing in length and breadth. *Palpi*: *maxillary* rather large, with the penultimate joint much incrassate, ovate, broadly truncate at the apex, the terminal joint aciculate, long, and sinuated; *labial* short, robust, second joint narrower than the first, with a long divergent seta at the outer apical angle, the terminal joint ovate. *Lingua* broad, with the apex obtuse and dentate. *Labium* moderate, with the apical margin concave; paraglossæ small, almost rudimentary. *Mentum* rather large, oblong, with the sides faintly incurved, furnished with two small setæ near each anterior angle. *Mandibles* rather large and robust, with the apex acute, scarcely hooked, minutely dentate at the back; *lamella membranacea* small, nearly circular; *stipes* large, produced into a long, very acute, curved process behind the mandible, and also with a smaller sinuated process near the base. *Maxillæ* 3-lobed; outer lobe corneous, formed by a pointed incurved process of the stipes; middle lobe coriaceous, short and broad, indistinctly 3-jointed, furnished at the apex with a long brush of strong setæ; inner lobe corneous, large and robust, armed with three long and strong incurved teeth at the apex. *Labrum* large, semioval, constricted before the middle, furnished with three large setæ below the middle, and a curved row of smaller setæ on the disc towards the apex. *Head* moderate, prominent. *Pronotum* rather small, not constricted. *Scutellum* small, triangular. *Elytra* very short, abruptly truncate. *Abdomen* robust, pointed, with four long segments wholly uncovered. *Prosternum* moderate, falcate; *episterna* very small, distinct; *epimera* rather large; coxal cavities contingent, enclosed posteriorly. *Mesosternum* large, minutely carinate, the carina pointed behind, extending between the coxæ; *episterna* not reaching the shoulders; *epimera* very large and broad, reaching the coxal cavities. *Metasternum* large, extending to the sides; *episterna* and *epimera* covered by the epipleura and inflexed margin of the elytra, leaving the extremity of the epimera only visible. *Venter* composed of seven segments; the first segment twice as long as the second, 2–7 nearly equal. *Legs* moderate; tibiæ faintly dentate on the inner edge; tarsi rather short, with the basal joint much longer than the second, the terminal joint slender; claws very slender; posterior femora very robust. *Coxæ*: *anterior* contingent and prominent; *intermediate* oval, divided by the carina; *posterior* widely distant, long, and prominent, not at all laminate.

Championella is distinguished from *Ptinella* by its convex corneous integument, form of the pronotum, abrupt truncation and straight apex of the elytra, diverse form of the antennæ, and the total absence of lamination on the posterior coxæ.

The single species, like *Ptinella*, is subcortical in its habits; it is found beneath the bark of pines.

I have named this genus after Mr. G. C. Champion, as a well-earned record of his energy and perseverance in the pursuit of these microscopic animals.

1. **Championella nubigena.** (Tab. III. fig. 24.)

Championella nubigena, Matth. Trans. Am. Ent. Soc. xi. p. 119[1].

Elongato-ovalis, valde convexa, nitida, castanea, pilis argenteis parce vestita; capite prominente, sat longo; oculis parvis, haud prominentibus; pronoto quam caput paullum longiore et latiore, prope medium latissimo, nitido, leviter et confertissime tuberculato, aut potius alutaceo, lateribus rotundatis, leviter marginatis, margine

basali fere recta, angulis obtusis; elytris brevibus, quam caput atque pronotum brevioribus, sed paullum latioribus, pone media latissimis, sat profunde et remote asperatis, interstitiis fortiter reticulatis, lateribus modice rotundatis, apicibus latis fere rectis; abdomine conico, sat acuto, segmentis quatuor omnino apertis, apicem versus dilutiore; pedibus sat longis, late flavis, femoribus posticis valde robustis; antennis modicis, obscure flavis. Long. corp. $\frac{5-6}{16}$ lin. = 0·63–0·75 millim.

Head prominent, rather long, finely alutaceous; eyes rather small, not prominent; antennæ moderate, dusky yellow; labrum yellow; palpi large, pale yellow. *Thorax* rather longer and broader than the head, widest near the middle, shining, lightly and very closely tuberculate or alutaceous; sides rounded and faintly margined; basal margin nearly straight, with the angles obtuse. *Scutellum* moderate, triangular, remotely asperate, with the interstices strongly reticulate. *Elytra* short, shorter but rather wider than the head and thorax, widest behind the middle, rather deeply and remotely asperate, with the interstices strongly reticulate; sides moderately rounded; apices nearly straight, slightly oblique towards the suture. *Abdomen* conic, rather acute, with four segments fully exposed, paler towards the apex. *Legs* rather long, bright yellow, the posterior femora very robust. *Underparts* castaneous, with the mouth, coxæ, and the apical two segments of the venter yellow.

Hab. GUATEMALA, Totonicapam 10,500 feet (*Champion* [1]).

This insect is distinguished from any species of *Ptinella*, apart from anatomical differences, by its convex and corneous integument, and by the abrupt truncation of its elytra.

PTERYCODES.

Pterycodes, Matthews, Trans. Am. Ent. Soc. xi. p. 120 (1884).

Antennæ 11-jointed, the 9th joint scarcely incrassated. *Palpi*: *maxillary* rather short, 4-jointed, the penultimate joint ovate, truncate at the apex, the terminal joint large and sinuated; *labial* large and long, 3-jointed—1 and 2 cylindric, 1 much broader than and nearly twice as long as 2, 3 much smaller than 2, conic. *Lingua* long and narrow, its apex slightly bifid, and with a strong recurved seta on each side near the points. *Labium* moderate, with the anterior margin nearly straight; paraglossæ robust, erect, slightly divergent, the apex acute, incurved, and with a strong seta on the outside near the point. *Mentum* oblong, with two strong setæ on the outer side of each anterior angle. *Mandibles* moderate, rather hooked, the præbasal angle obtuse, moderately denticulated at the back; *lamella membranacea* moderate, almost circular; *stipes* rather small, produced into a long and robust curved process behind the mandible. *Maxillæ* 3-lobed; outer lobe corneous, formed by a long robust pointed process of the stipes; middle lobe coriaceous, 2-jointed, furnished at the apex with a long brush of strong and long setæ; inner lobe corneous, rather small, placed much lower than the middle one, armed at the apex with five or six sharp incurved teeth. *Labrum* large, semioval, slightly constricted before the middle, furnished with three strong setæ on each side, and a curved row of smaller setæ beyond the middle. *Head* large and prominent. *Pronotum* large, slightly constricted near the base. *Scutellum* triangular. *Elytra* rather long, truncate at the apex. *Abdomen* moderately elongate, with three segments exposed. *Prosternum* moderate, falcate; *episterna* small, distinct; *epimera* rather large; coxal cavities contingent, broadly enclosed posteriorly. *Mesosternum* rather large, slightly carinated, the carina produced between the middle coxæ; *episterna* large, humeral; *epimera* very large, reaching the coxal cavities. *Metasternum* rather short, not extending to the sides; *episterna* and *epimera* large, and very broad. *Venter* composed of six segments, the basal and apical segments longer than the intermediate. *Legs* long and slender, the tarsi 3-jointed, with the basal joint twice as large as the second, and the terminal joint long and slender, the claws slender: *anterior* coxæ prominent and contingent, the tibiæ strongly dentate on the inner edge; *intermediate* coxæ divided by the carina, the tibiæ moderately dentate on the inner edge; *posterior* coxæ widely distant, broadly laminated, the lamina triangular, the tibiæ faintly denticulate and with two strong spurs near the apex on the inner edge.

This genus seems intermediate between *Pteryx* and *Ptinella*; from the former it

differs in having six ventral segments, from the latter in the length of the elytra, and from both in the small size of the ninth joint of the antennæ, the long and peculiarly formed labial palpi, the diverse form of the maxillæ and the short maxillary palpi, in the wide separation and broad lamination of the posterior coxæ, and in the metasternum not reaching the sides of the body. The single known species is from Guatemala.

1. **Pterycodes salvini.**

Pterycodes salvinii, Matth. Trans. Am. Ent. Soc. xi. p. 121 [1].

Subovatus, valde convexus, nitidus, castaneus, pilis brevissimis aureis parce vestitus; capite prominente, magno, lato; oculis magnis, sat prominentibus; pronoto modico, quam caput paullum latiorie haud longiore, prope medium latissimo, basin versus constricto, punctis magnis foveolatis notato, interstitiis alutaceis, lateribus antice rotundatis, postice constrictis, latissime marginatis, margine basali leviter sinuata, angulis acutis prominentibus; elytris translucidis, ovatis, quam caput atque pronotum parum longioribus, vix latioribus, prope media latissimis, punctis asperatis profundis remotis, ordinibus curvatis dispositis, interstitiis leviter alutaceis, lateribus leviter rotundatis et leviter marginatis, apicibus latis valde rotundatis; abdomine conico, segmentis tribus apertis, duobus ultimis flavis; pedibus atque antennis longis, gracilibus, læte flavis. Long. corp. $\frac{7-8}{16}$ lin. = 0·87–1 millim.

Head prominent, large, and broad, produced in front, alutaceous and shining, the mouth yellow; eyes large, rather prominent; antennæ very long and slender, bright yellow. *Thorax* moderate, rather wider but not longer than the head, widest near the middle, constricted near the base; regularly marked with deep and rather remote foveolate punctures, with the interstices alutaceous; sides rounded in front and constricted near the base, very broadly margined; basal margin slightly sinuated, with the angles acute and prominent. *Scutellum* moderate, triangular, marked with remote foveolate punctures. *Elytra* ovate, transparent, rather longer but scarcely wider than the head and thorax, widest near the middle; marked with deep asperate punctures in curved rows, with the interstices alutaceous; sides a little rounded and slightly margined; apex broad and much rounded. *Abdomen* conic, rather acute, with three segments exposed, the last two segments yellow. *Legs* long and slender, bright yellow. *Underparts* castaneous, with the mouth, coxæ, and apical segment of the venter bright yellow.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion* [1]).

TRICHOPTERYX.

Trichopteryx, Kirby & Spence, Introd. Ent. iii. p. 90 (1826); Matthews, Trich. Illustr. p. 112, t. 12 (1872).

Body oval or ovate, generally pubescent, often very convex. *Head* sessile, deflexed; eyes moderate, with the facets few and large. *Thorax* varied in form and size, with the posterior angles often much produced. *Scutellum* triangular, generally large. *Elytra* truncate. *Wings* pedunculate, very long and narrow, fringed on both sides with very long setæ, articulated at their base. *Abdomen* more or less exposed, with the apical segment generally dentate *Antennæ* 11-jointed, with the two basal joints very large, the intermediate joints very slender, the club moniliform, generally setose. *Palpi*: *maxillary* 4-jointed, with the third joint the largest, and the apical joint acicular; *labial* 3-jointed, long and slender, with the apical joint obtusely conical. (In this and other genera of Trichopterygidæ the labial palpi arise from a process of the labium, which presents the appearance of an additional joint but is probably an integral part of the labium.) *Prosternum* moderate; *episterna* rather large, trigonal; *epimera* large, broadly enclosing the coxal cavities. *Mesosternum* large, carinate; *episterna* long and narrow; *epimera* very large, extending to the coxal cavities; coxal cavities large, with a trochantin on the outer side of the cavity. *Metasternum* large, transverse, extending to the sides of the body, and produced posteriorly between the coxæ; *episterna* large, concealed by the elytra, with their interior basal angle alone visible; *epimera* large, concealed by

the elytra, with their extremity alone visible beyond the metasternum. *Venter* composed of six segments—1–5 nearly equal to each other in length, 6 rather longer, generally with a circularly curved deeply impressed line near the apex in the male sex. *Legs* generally robust, with the posterior coxæ broadly laminated; tibiæ armed with strong spurs, often dilated in the males; tarsi 3-jointed, with the two basal joints generally very small, but sometimes strongly dilated in the males.

With reference to the foregoing description of the labial palpi, I would observe that, as in other coleopterous families these organs possess only three articulations, it is scarcely probable that they should exceed that number in the Trichopterygidæ. Nevertheless, throughout the whole of that family, the labial palpi conspicuously exhibit the appearance of a fourth joint at their base; which, if not a true articulation, must be an elevated portion of the anterior margin of the labium, and as such I have here and shall hereafter describe it.

The species of *Trichopteryx* present a great variety of form, especially in the shape of the thorax; but their facial resemblance is so strongly marked, that they can easily be separated from all other genera. The chief difficulty lies in finding characters available for tabulation; the thorax affords the most obvious difference, but even there the gradations between the two extremes are so minute that it is sometimes difficult to determine to which section a species properly belongs. For this reason the characters given in the following Table must not be too strictly interpreted; but they will in a general manner assist in determining a species, and this is the utmost I can hope to accomplish.

This genus contains a very large number of species, and appears to be universally distributed.

Table of the Central-American species known to me.

Thorax wider, or much wider, than the elytra.
- Thorax widest at the base.
  - Head and thorax black, the elytra castaneous.
    - Form much attenuated posteriorly, with the thorax much dilated . *rufescens.*
    - Form oblong, the thorax moderately dilated . . . . . *similior.*
  - Head, thorax, and elytra castaneous.
    - Size larger, the surface very shining . . . . . *lucida.*
    - Size small, the surface finely and closely punctured . . . . . *crotchi.*
  - Entirely fuscous.
    - Surface clothed with grey pubescence . . . . . *glauca.*
    - Surface clothed with fulvous pubescence . . . . . *atomaria.*

Entirely black, or fuscous-black.
- Form exceedingly convex.
  - Size very large, without erect setæ . . . . . *godmani.*
  - Size moderate, with erect setæ.
    - Thorax deeply sculptured . . . . . *alliberti.*
    - Thorax very lightly sculptured . . . . . *grossa.*

Thorax widest before the base.
  Thorax and elytra with erect setæ.
    Size small; antennæ yellow . . . . . *minor*.
    Size larger; antennæ black . . . . . *grandicollis*.
  Thorax and elytra without erect setæ.
    Elytra much narrower than the thorax . . . . . *angustipennis*.
    Elytra scarcely narrower than the thorax . . . . . *excelsa*.
Thorax not wider than the elytra.
  Entirely castaneous . . . . . *bidilatata*.
  Head and thorax black, the elytra rufous.
    Abdomen castaneous (without erect setæ) . . . . . *brevior*.
  Entirely black.
    Antennæ flavescent . . . . . *nigrita*.
    Antennæ black . . . . . *vicina*.
Thorax narrower than the elytra.
  Body very short and shining . . . . . *vitrea*.
  Body elongate, pubescent . . . . . *aubæi*.

1. **Trichopteryx godmani.** (Tab. III. fig. 20.)

Trichopteryx godmanni, Matth. Trans. Am. Ent. Soc. xi. p. 128 [1].

Convexissima et latissima, nigra, nitidissima, pilis brevibus argenteis vestita; capite modico, oculis sat parvis; pronoto permagno, latissimo, valde dilatato, ad basin latiore, angulis posticis latis valde productis, disco nitidissimo, tuberculis minutis, ordinibus irregularibus dispositis, confertim ornato, interstitiis leviter sed confertim reticulatis, lateribus modice rotundatis, leviter marginatis, marginibus atque angulis posterioribus dilutioribus; elytris fuscescentibus, brevioribus, postice valde attenuatis, lateribus fere rectis, ordinibus transversis sinuatis confertim levissime asperatis; pedibus læte flavis; antennis flavescentibus. Long. corp. $\frac{15}{16}$–1 line = 1·87–2 millim.

Head rather small and pointed in front, very convex, shining, and almost smooth; eyes moderate; antennæ moderate, obscure yellow. *Thorax* very large and very convex, much dilated posteriorly, widest at the base, with the sides rounded and slightly margined; closely covered with minute tubercles in irregular rows, with the interstices closely and finely reticulated; basal margin sinuated, with the angles pale, broad, and much produced. *Scutellum* rather large, triangular, closely and finely asperated. *Elytra* fuscescent, rather short, rather narrower than and nearly as long as the head and thorax, much attenuated posteriorly, with the sides nearly straight, closely and finely asperate in nearly straight transverse rows; apex broad, slightly rounded, paler, with the extreme edge white. *Abdomen* considerably exserted, with the apex obtuse and bidentate. *Legs* robust, bright yellow, with the anterior tibiæ and the basal joints of the tarsi dilated.

Hab. GUATEMALA, Balheu in Vera Paz (*Champion* [1]).

Three specimens. Differs from all other species of the genus in its very large size, convex and broad shape, and also in sculpture. This is the largest and finest species of *Trichopteryx* yet discovered.

2. **Trichopteryx grossa.**

Acratrichis grossa, Motsch. Bull. Mosc. xli. part 2, p. 177 [1].
Trichopteryx grossa, Matth. Trans. Am. Ent. Soc. xi. p. 128 [2].

Latissima, convexissima, nigra, nitida, pilis griseis parce vestita, setis validis nigris erectis utrinque armata;

capite magno, lato, oculis modicis; pronoto permagno, ad basin valde dilatato, angulis posticis latis valde productis, disco nitidissimo, tuberculis minutissimis remotis interstitiisque glabris nitidissimis ornato; elytris brevibus, postice valde attenuatis, leviter confertim transverse asperatis, lateribus fere rectis, apicibus vix rotundatis; pedibus flavis; antennis longioribus, obscure flavis. Long. corp. $\frac{8-9}{16}$ lin.=1–1·12 millim.

Head large and very broad, produced in front, very shining, almost glabrous; eyes rather large, not prominent; antennæ long, slender, pitchy-testaceous. *Thorax* very large, very convex and shining, much dilated at the base, with the sides rounded and rather widely margined, a strong erect black seta on each side near the base; covered with very minute distant tubercles, with the interstices smooth and shining; basal margin nearly straight, with the angles much produced and paler. *Scutellum* very large and broad, lightly asperate. *Elytra* fuscescent, short and much attenuated toward the apex, the sides nearly straight, furnished with a strong erect black seta on each side near the shoulder and another towards the apex, shorter and rather narrower than the head and thorax, finely and closely asperate in wavy transverse rows; apex broad, nearly straight, and paler. *Abdomen* moderately exserted, with the apex rather strongly tridentate. *Legs* moderate, robust, dark yellow. *Underparts* black, the mouth and the coxæ piceous.

Hab. North America, Washington [1].—Guatemala, Cerro Zunil, Balheu, Capetillo (*Champion* [2]).

This species, found rather plentifully by Mr. Champion at Capetillo, is distinguished by its large size, short and convex form, large, very shining and remotely sculptured thorax, long antennæ, and erect setæ. Motschulsky's description [1] of *Acratrichis grossa*, from Washington, agrees, as far as it goes, with this species; and I think it wiser to adopt this name, than perhaps erroneously to describe the Guatemalan insect as new.

3. Trichopteryx alliberti.

Trichopteryx alliberti, Matth. Trich. Illustr. p. 139, t. 26. f. 13 [1]; Trans. Am. Ent. Soc. xi. p. 128 [2].

Lata, convexissima, nigra, nitida, pilis brevibus griseis densius vestita; capite atque pronoto permagnis, latissimis; pronoto seta valida nigra erecta ad latus utrumque instructo, angulis posticis valde productis; elytris postice valde attenuatis, setis duabus erectis ad latera exteriora instructis; pedibus atque antennis gracilibus, læte flavis. Long. corp. $\frac{9}{16}$ lin.=1·13 millim.

Head very large and broad; eyes not prominent; antennæ long and slender, bright yellow. *Thorax* very large and broad, very convex, with a strong, erect black seta on each side; ornamented with rather large tubercles in close rows, with the interstices reticulated; hinder angles much produced. *Elytra* short, much attenuated posteriorly, narrower than the thorax, with two strong erect setæ on the outer margins. *Legs* moderate, bright yellow.

Hab. Guatemala, Las Mercedes 3000 feet (*Champion* [2]).—Venezuela, Caracas [1].

Differs from *T. grossa* in the sculpture of the thorax.

4. Trichopteryx lucida.

Trichopteryx lucida, Matth. Trans. Am. Ent. Soc. xi. p. 129 [1].

Sat brevis, sat lata, postice valde attenuata, valde convexa, nitidissima, translucide castanea, pilis sat longis aureis vestita; capite sat magno; oculis magnis, valde prominentibus; pronoto magno, postice valde dilatato, ad basin latissimo, tuberculis parvis remotis indistinctis interstitiisque glabris nitidissimis ornato, lateribus leviter rotundatis, late marginatis, margine basali leviter arcuata, angulis acutis valde productis; elytris brevibus, quam caput atque pronotum angustioribus fere pariter longis, valde attenuatis, ad humeros latissimis, sat leviter irregulariter asperatis, apicibus rotundatis, sat latis; antennis longis, gracillimis, pallide flavis; pedibus modicis, læte flavis. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head rather large, not much produced in front, very shining, marked with a few remote punctures; eyes large and very prominent; antennæ rather long and very slender, pale yellow. *Thorax* rather large, longer and wider than the head, much dilated posteriorly, widest at the base, very convex and very shining; covered with very minute distant tubercles, the interstices smooth and very shining; sides slightly rounded and broadly margined; basal margin slightly arcuate, with the angles much produced and acute and paler. *Scutellum* moderate, triangular, moderately asperate. *Elytra* short, much attenuated posteriorly, narrower and not longer than the head and thorax, widest at the shoulders, distantly and irregularly asperate; sides nearly straight; apex broad, rounded, and paler. *Abdomen* very little exserted, testaceous. *Legs* rather short, bright yellow. *Underparts* wholly testaceous, with the metasternum dusky.

Hab. GUATEMALA, Cerro Zunil 4000 to 5000 feet (*Champion* [1]).

Differs from the allied species in its very shining translucent surface, pale and slender antennæ, testaceous underparts, and in sculpture.

5. **Trichopteryx similior.**

Trichopteryx similior, Matth. Trans. Am. Ent. Soc. xi. p. 130 [1].

Sat brevis, postice parum attenuata, convexa, sat nitida, capite atque pronoto nigris, elytris rufescentibus, pilis brevibus pallidis parce vestita; capite magno, antice valde rotundato; oculis magnis, haud prominentibus; pronoto modico, quam caput longiore et parum latiore, ante basin latissimo, maribus magis dilatato, tuberculis modicis sat remotis interstitiisque nitidis fortiter reticulatis ornato, lateribus marginatis et rotundatis, margine basali sinuata, angulis acutis modice productis; elytris subquadratis, maribus postice parum attenuatis, quam caput atque pronotum parum brevioribus, haud latioribus, ordinibus remotis sinuatis modice asperatis, apicibus latis fere rectis; pedibus atque antennis modicis, obscure flavis. Long. corp. $\frac{6-7}{16}$ lin.=0·75–0·87 millim.

Head large and broad, shining, ornamented with small remote tubercles; eyes moderate, not prominent; antennæ moderate, dusky yellow. *Thorax* moderate, longer and broader than the head, widest before the base, more strongly dilated in the males; ornamented with moderate and rather remote tubercles, with the interstices strongly reticulated and shining; sides margined and slightly rounded; basal margin sinuated, with the angles pale and moderately produced. *Scutellum* large, triangular, remotely asperate. *Elytra* short, subquadrate, attenuated posteriorly in the males, rather shorter and not wider than the head and thorax, moderately asperate in remote wavy rows; sides slightly rounded; apex broad, nearly straight. *Abdomen* considerably exposed, with the apex tridentate and rather pointed. *Legs* moderate, bright yellow. *Underparts* castaneous, with the mouth and coxæ yellow.

Hab. GUATEMALA, Rio Naranjo [1], El Tumbador 2500 feet, El Reposo 800 feet (*Champion*).

Differs from *T. discolor*, Hald., in its smaller size, more convex form, fainter sculpture and less dilatation of the thorax, and more attenuated elytra. Found in numbers at El Reposo, rarely elsewhere.

6. **Trichopteryx crotchi.**

Trichopteryx crotchii, Matth. Ent. Monthly Mag. i. p. 248 [1]; Trans. Am. Ent. Soc. xi. p. 130 [2].

Acrotrichis crotchii, Wollast. Col. Atlant. Append. p. 15 [3].

Acratrichis infuscuta (sic), Motsch. Bull. Mosc. xli. part 2, p. 179 [4].

Acratrichis fulva, Motsch. loc. cit. p. 180 [5].

Brevis, sat lata, convexa, castaneo-brunnea, pilis pallidis vestita; capite modico, nitido; oculis modicis, prominulis; pronoto magno, valde convexo, ad basin valde dilatato, tuberculis minutissimis, ordinibus obliquis

remotis dispositis interstitiisque levissime reticulatis, ornato, margine basali fere recta, angulis valde productis late dilutioribus; elytris quam caput atque pronotum dilutioribus, brevioribus et angustioribus, valde attenuatis, leviter et remote asperatis, apicibus fere rectis; pedibus atque antennis læte flavis. Long. corp. $\frac{6}{16}$ lin.=0·75 millim.

Hab. Canary Islands, Gomera [1 3].—Guatemala, San Gerónimo (*Champion* [2]); Panama [4], Obispo (*Motschulsky* [5]).

This species was captured not uncommonly by Mr. Champion on the banks of a stream in Guatemala.

7. Trichopteryx rufescens.

Trichopteryx rufescens, Matth. Trans. Am. Ent. Soc. xi. p. 131 [1].

Sat brevis, lata, valde convexa, nitida, pilis brevibus flavescentibus vestita, capite atque pronoto nigris, elytris rufo-fuscis; capite magno; oculis magnis, prominentibus; pronoto magno, ad basin valde dilatato, tuberculis distinctis sat confertim dispositis interstitiisque reticulatis nitidis ornato, margine basali fortiter sinuata, angulis latis valde productis; elytris sat brevibus, postice valde attenuatis, ordinibus transversis confertim asperatis, apicibus valde rotundatis, late dilutioribus; pedibus atque antennis læte flavis. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head large, not much produced in front, sparingly covered with small distinct tubercles; eyes large and prominent; antennæ moderate, rather slender, yellow. *Thorax* very large, much dilated at the base, longer and much wider than the head; rather closely covered with distinct tubercles, with the interstices reticulated and shining; sides rounded and strongly margined, widest at the base; basal margin deeply sinuated, with the angles broad and much produced. *Scutellum* large, triangular, closely asperate. *Elytra* short, much attenuated posteriorly, rufous-brown, not longer and rather narrower than the head and thorax, closely but rather lightly asperate; sides nearly straight; apex much rounded, broadly pale, with the extreme edge white. *Abdomen* moderately exposed, rufous-brown. *Legs* very robust, with the basal joints of all the tarsi dilated, bright yellow. *Underparts* rufo-piceous, with the metasternum and gular region black, the mouth and coxæ bright yellow.

Hab. Guatemala, Balheu, San Gerónimo, Capetillo (*Champion* [1]); Panama, San Feliz, Peña Blanca (*Champion*).

Differs from its allies in its convex and attenuated form, rufous-brown elytra, bright yellow legs and antennæ, and general sculpture.

8. Trichopteryx glauca.

Trichopteryx glauca, Matth. Trans. Am. Ent. Soc. xi. p. 131 [1].

Rufo-fusca, pilis brevibus sericeis glaucis dense vestita, sat brevis, maribus postice attenuata, convexa, haud nitida; capite magno, lato; oculis haud prominentibus; pronoto magno, maribus postice valde dilatato, ad basin latissimo, tuberculis parvis ordinibus sinuatis confertim dispositis interstitiisque glabris ornato, lateribus modice rotundatis, vix marginatis, margine basali sinuata, angulis latis acutissimis valde productis; elytris subquadratis, quam caput atque pronotum parum angustioribus, haud longioribus, ad humeros latissimis, per tota confertim sat profunde asperatis, lateribus fere rectis, apicibus latis rotundatis dilutioribus, extremis albidis; pedibus robustis, læte flavis; antennis gracilibus, pallide flavis. Long. corp. $\frac{6}{16}$ lin. =0·75 millim.

Head large and broad, rounded in front, closely tuberculate; eyes rather large, not prominent; antennæ very slender, pale yellow. *Thorax* rather large, longer and wider than the head, dilated posteriorly, widest at the base; closely covered with small tubercles in close wavy rows, with the interstices smooth; sides slightly rounded and faintly margined; basal margin much sinuated, with the angles broad, very acute, and

much produced. *Scutellum* rather large, triangular, closely asperate. *Elytra* subquadrate, rather narrower and not longer than the head and thorax, widest at the shoulders, closely asperate throughout; sides nearly straight; apex broad, rounded, and pale, with the extreme edge white. *Abdomen* considerably exserted, ferruginous, with the apex distinctly bidentate. *Legs* robust, bright yellow. *Underparts* castaneous, with the mouth and coxæ bright yellow.

Hab. PANAMA, Bugaba (*Champion* [1]).

Differs from the allied species in its rufo-glaucous colour, softly sericeous appearance, pale slender antennæ, and very close sculpture.

Obs. The females of this species differ very much from the males in form: they are oblong, and their thorax is not dilated at the base, nor their elytra attenuated towards the apex.

9. **Trichopteryx atomaria.**

Dermestes atomarius, Degeer, Mém. Hist. Ins. iv. p. 218, t. 8. ff. 16–20 (1774) [1].

Trichopteryx atomaria, Matth. Trich. Illustr. p. 141, t. 27. f. 2 [2]; Trans. Am. Ent. Soc. xi. p. 131 [3].

Short and broad, very convex, pitchy black, shining, clothed with rather long fulvous hair; head large and rather prominent; eyes moderate; thorax large, dilated posteriorly, widest at the base, ornamented with small remote tubercles, with the interstices very shining and faintly reticulated, the basal margin deeply sinuated, the hinder angles much produced and broadly flavescent; elytra short, much attenuated in the male, nearly quadrate in the female, rather deeply asperate, the apex broadly flavescent; legs and antennæ yellow. Long. corp. $\frac{6-7}{16}$ lin. = 0·75–0·87 millim.

Hab. NORTH AMERICA, United States [3].—GUATEMALA, San Gerónimo, Rio Naranjo (*Champion*).—EUROPE [1 2].

Specimens of this cosmopolitan insect were found by Mr. Champion in Guatemala.

10. **Trichopteryx vicina.**

Trichopteryx vicina, Matth. Cist. Ent. ii. p. 172 (1877) [1]; Trans. Am. Ent. Soc. xi. p. 138 [2].

Oblong, moderately convex, deep black, sparingly clothed with short flavescent hair; head very large and broad; thorax large, convex, widest at the base, ornamented with small indistinct tubercles in distant rows, with the interstices shining and deeply reticulated, the basal margin nearly straight, with the angles produced and pale; elytra almost quadrate, with the sides parallel, rather narrower than the thorax, moderately asperate in remote rows, with the interstices reticulate, the apex broad, scarcely rounded; legs bright yellow; antennæ black. Long. corp. $\frac{6}{16}$ lin. = 0·75 millim.

Hab. NORTH AMERICA, British Columbia [1 2].—GUATEMALA, Quezaltenango 7800 feet (*Champion*).

This species is allied to the European *T. picicornis*, from which it differs in its larger size and diverse sculpture, especially of the thorax.

11. **Trichopteryx grandicollis.**

Trichopteryx grandicollis, Mannerh. Bull. Mosc. 1844, i. p. 181 [1]; Matth. Trich. Illustr. p. 135, t. 26. f. 4 [2]; Trans. Am. Ent. Soc. xi. p. 134 [3].

Rather broad, very convex, brassy-black, thickly clothed with fulvous hair; head large and broad; thorax

large, widest before the base, ornamented with moderate tubercles, irregularly placed, with the interstices reticulate, the sides margined and very much rounded, furnished with an erect black seta on each side behind the middle, the hinder angles acute and considerably produced; elytra moderate, scarcely longer but rather narrower than the head and thorax, deeply and irregularly asperate, the sides margined and slightly rounded, furnished with an erect black seta on each side near the shoulder and another behind the middle, the apex slightly contracted and pale; antennæ long, piceous, or black; legs yellow. Long. corp. $\frac{8-9}{16}$ lin.=1–1·12 millim.

Hab. Guatemala, Totonicapam 10,500 feet (*Champion* [3]).—Europe [1 2].

A single specimen of this species was found by Mr. Champion. It seems strange that this very common European insect should occur in such a locality and at so high an altitude in Central America. But after the most careful examination, I can discover no point of form or sculpture in which this specimen differs from the European examples of the female, the sides of the thorax in this sex being always less dilated than in the male.

12. **Trichopteryx angustipennis.**

Trichopteryx angustipennis, Matth. Trans. Am. Ent. Soc. xi. p. 132 [1].

Suboblonga, thoracis lateribus valde dilatatis, nitida, valde convexa, piceo-nigra, pilis flavis vestita; capite magno; oculis magnis, haud prominentibus; pronoto magno, ad latera valde dilatato, prope medium latissimo, tuberculis magnis ordinibus irregularibus dispositis interstitiisque glabris nitidis ornato, lateribus valde rotundatis et fortiter marginatis, margine basali valde depressa, sinuata et reflexa, angulis flavis, acutis, vix productis; elytris fuscis, sat brevibus, quam caput atque pronotum haud longioribus multo angustioribus, prope media latissimis, ordinibus transversis, sat profunde asperatis, apicibus parum contractis et parum rotundatis, extremis albidis; abdomine longius exserto, obtuso; pedibus atque antennis flavis. Long. corp. $\frac{8}{16}$ lin.=1 millim.

Head very large, moderately tuberculate, shining; eyes large, not prominent; antennæ long and slender, yellow, with the apex dusky. *Thorax* rather large, wider and much longer than the head, dilated at the sides, widest near the middle, ornamented with rather large tubercles in irregular rows, with the interstices smooth and shining, much depressed towards the base; sides strongly margined, with the margin yellow; basal margin sinuated and reflexed, with the angles acute, scarcely produced, yellow. *Scutellum* large, triangular, rugosely asperate. *Elytra* rufous-brown, short, not longer but much narrower than the head and thorax, widest near the middle, rather contracted towards the apex; moderately asperate in transverse rows, with the interstices shining; apex broad, not much rounded, with the extreme edge white. *Abdomen* moderately exposed; the apex obtuse, faintly tridentate. *Legs* rather long, bright yellow. *Underparts* black, with the mouth and coxæ yellow.

Hab. Guatemala, Capetillo, San Gerónimo (*Champion* [1]).

Differs from its allies in the broad and peculiar form of the thorax, and in the short and narrow elytra.

13. **Trichopteryx excelsa.**

Trichopteryx excelsa, Matth. Trans. Am. Ent. Soc. xi. p. 133 [1].

Brevis rotundata, haud attenuata, valde convexa, sat nitida, capite atque pronoto nigris, elytris rufescentibus, pilis fulvis parce vestita; capite magno; oculis prominentibus; pronoto valde convexo, ad basin depresso, quam caput parum longiore, multo latiore, ante basin latissimo, tuberculis minutis ordinibus remotis

sinuatis transversis dispositis interstitiisque nitidis reticulatis ornato, lateribus marginatis, valde rotundatis, margine basali fere recta, angulis, latis valde productis, late flavescentibus; elytris brevibus, quam caput atque pronotum brevioribus et haud latioribus, valde convexis, ad media latissimis, ordinibus transversis remotis sinuatis, modice asperatis, lateribus valde rotundatis, apicibus valde rotundatis; pedibus atque antennis modicis, obscure flavis. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head large, very convex, rounded in front, shining, ornamented with minute distant tubercles; eyes moderate, prominent; antennæ and palpi moderate, dusky yellow. *Thorax* rather short, rather longer and much wider than the head, widest before the base, very convex, but much depressed posteriorly; ornamented with minute tubercles in remote wavy rows, with the interstices reticulated and shining; sides much rounded and slightly margined; basal margin faintly sinuated, with the angles very broad, much produced, and broadly flavescent. *Scutellum* very large, broad, triangular, moderately asperate. *Elytra* very short, convex, shorter and not wider than the head and thorax, widest at the middle, moderately asperate in transverse distant rows; sides much rounded; apex much rounded and narrowly pale. *Abdomen* considerably exserted, obtuse. *Legs* moderate, dark yellow. *Underparts* castaneous, with the mouth and coxæ paler.

Hab. GUATEMALA, Totonicapam 10,500 feet (*Champion* [1]).

Differs from the other species of the genus in its short and convex form, rounded sides and depressed base of the thorax, short rounded elytra, and in sculpture.

14. **Trichopteryx minor.**

Trichopteryx minor, Matth. Trans. Am. Ent. Soc. xi. p. 134 [1].

Oblongo-ovalis, convexa, sat nitida, nigra, pilis flavescentibus dense vestita; capite modico; oculis haud prominentibus; pronoto sat longo, prope medium latiore, postice haud dilatato, tuberculis magnis irregulariter dispositis interstitiisque nitidis leviter reticulatis ornato, lateribus marginatis modice rotundatis, seta valida erecta ante media utrinque armatis, margine basali reflexa, valde sinuata, angulis longe productis; elytris sat brevibus, fere quadratis, lateribus vix rotundatis, ordinibus transversis profunde asperatis; antennis longis, flavis; pedibus robustis, læte flavis. Long. corp. $\frac{7}{16}$ lin.=0·87 millim.

Head moderate, produced in front, shining, with a few minute tubercles irregularly placed; eyes moderate, not prominent; antennæ very long and slender, dusky yellow. *Thorax* almost quadrate, longer and rather wider than the head, widest near the middle; closely covered with large tubercles in irregular wavy rows, with the interstices shining and faintly reticulated; sides margined and moderately rounded, each with a strong erect seta before the middle; basal margin reflexed and rather deeply sinuated, with the angles much produced and paler. *Scutellum* large, triangular, deeply and closely asperate. *Elytra* rather short, quadrate, with the sides slightly rounded, brownish in tint, not longer or wider than the head and thorax, deeply and closely asperate in transverse rows, with a strong erect seta on each near the shoulder and another near the apex; the apex broad, much rounded, paler, with the extreme edge white. *Abdomen* rather long, fuscous, with the apex of the last segment bidentate. *Legs* large, robust, bright yellow. *Underparts* black, with the mouth and coxæ bright yellow.

Hab. GUATEMALA, El Tumbador, San Gerónimo (*Champion* [1]).

Rather common. Differs from *T. grandicollis* in its much smaller size, oblong form, and deeper sculpture.

15. **Trichopteryx brevior.**

Trichopteryx brevior, Matth. Trans. Am. Ent. Soc. xi. p. 136 [1].

Oblonga, modice convexa, fusco-nigra, elytris dilutioribus, sat nitida, pilis brevibus griseis vestita; capite magno, antice producto; oculis magnis, sat prominentibus; pronoto modico, sat dilatato, prope basin latiore, tuber-

culis parvis indistinctis remotis, interstitiis sat profunde reticulatis nitidis, ornato, angulis posterioribus valde productis, acutis; elytris quadratis, quam caput atque pronotum nec longioribus nec latioribus, ordinibus transversis sat leviter asperatis, lateribus fere rectis, apicibus latis, valde rotundatis, extremis albidis; abdomine castaneo; pedibus atque antennis flavis. Long. corp. $\frac{6}{16}$ lin.=0·75 millim.

Head rather large, produced in front, ornamented with small remote tubercles, with the interstices reticulate and shining; eyes large and rather prominent; antennæ moderate, yellow. *Thorax* moderate, slightly dilated posteriorly, widest near the base, rather longer and wider than the head, covered with small indistinct and remote tubercles, the interstices shining and reticulated; sides moderately rounded, rather strongly margined; basal margin sinuated, with the angles acute and much produced. *Scutellum* moderate, triangular, transversely and rather deeply asperate. *Elytra* quadrate, not longer or wider than the head and thorax, fuscous, faintly asperate in transverse rows, with the interstices reticulate and shining; apex broad and rounded, with the extreme edge white. *Abdomen* castaneous, rather long and obtuse. *Legs* moderate, bright yellow. *Underparts* castaneous, with the mouth and coxæ paler.

Hab. GUATEMALA, Zapote and near the city (*Champion* [1]).

Not uncommon. Differs from the North-American *T. parallela*, Motsch., in its broader and less convex form, darker colour, and more indistinct sculpture.

16. **Trichopteryx bidilatata.**

Trichopteryx bidilatata, Matth. Trans. Am. Ent. Soc. xi. p. 138 [1].

Oblonga, convexa, haud nitida, obscure castanea, pilis brevibus griseis dense vestita; capite magno, lato; oculis magnis, sat prominentibus; pronoto transverso, postice haud dilatato, ad medium latiore, tuberculis magnis, ordinibus transversis sinuatis dispositis, confertim ornato, interstitiis reticulatis, sat nitidis, margine posteriore fere recta, angulis vix productis; elytris oblongo-ovalibus, ad media latioribus, ordinibus transversis profunde et confertissime asperatis; pedibus atque antennis flavis, his obscurioribus. Long. corp. $\frac{5-6}{16}$ lin.=0·63–0·75 millim.

Head large and broad, ornamented with tubercles in transverse rows and reticulate interstices; eyes large and rather prominent; antennæ moderate, dusky yellow. *Thorax* moderate, transverse, not longer but rather wider than the head, widest near the middle, with the sides rounded and margined; closely covered with rather large tubercles in transverse wavy rows, the interstices reticulate and slightly shining; basal margin nearly straight, with the angles very little produced. *Scutellum* large, triangular, closely asperate. *Elytra* oblong-oval, not wider or longer than the head and thorax, widest near the middle, very closely asperate in transverse rows; apex broad, almost straight, with the extreme edge white. *Abdomen* much exserted, obtuse, with the posterior edge of each segment pale. *Legs* rather long, bright yellow. *Underparts* black, with the coxæ and apex of the abdomen piceous.

Hab. GUATEMALA, El Tumbador, Balheu, San Gerónimo, and Senahu (*Champion* [1]).

Differs from all the species of the genus except *T. edithia* in its doubly dilated outline; from *T. edithia* in its smaller size, longer elytra, and darker antennæ.

17. **Trichopteryx nigrita.**

Trichopteryx nigrita, Matth. Trans. Am. Ent. Soc. xi. p. 138 [1].

Oblonga, modice convexa, haud nitida, fusco-nigra, pilis fulvis vestita; capite modico; oculis sat prominentibus; pronoto modico, fere transverso, postice parum dilatato, tuberculis minutis, ordinibus sinuatis remotis dispositis interstitiisque sat profunde reticulatis, vix nitidis, ornato, lateribus modice rotundatis, sat late marginatis, angulis posterioribus latis parum productis; elytris oblongis, quam caput atque pronotum parum longioribus haud latioribus, lateribus fere rectis, transverse asperatis, apicibus late dilutioribus et valde rotundatis; pedibus atque antennis flavis, his obscurioribus. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head moderate, rather produced in front, adorned with small scattered tubercles, with the interstices reticulate; eyes moderate, rather prominent; antennæ rather slender, dusky yellow. *Thorax* moderate, wider but scarcely longer than the head, slightly dilated towards the base, widest at the base; covered with small tubercles in rather remote wavy rows, with the interstices rather deeply reticulated and scarcely shining; sides moderately rounded and rather strongly margined; the basal margin slightly sinuated, with the angles broad and a little produced. *Scutellum* large, triangular, deeply and closely asperate. *Elytra* oblong, with the sides straight, fuscous, rather longer (not wider) than the head and thorax, rather deeply and closely asperate in transverse rows; the apex broad, much rounded, and paler. *Abdomen* much exserted, piceous, with the apex obtusely bidentate. *Legs* rather slender, yellow. *Underparts* black, with the coxæ and the apex of the abdomen piceous.

Hab. GUATEMALA, near the city (*Champion* [1]).

Differs from the allied species in its small size, oblong form, and piceous apex of the abdomen; from *T. obscæna*, Woll., it is separated by its much smaller size, more depressed form, and more rugose sculpture.

18. **Trichopteryx vitrea.**

Trichopteryx vitrea, Matth. Trans. Am. Ent. Soc. xi. p. 139 [1].

Brevissima, lata, valde convexa et nitida, translucide castanea, pilis aureis parce vestita; capite magno, lato; oculis magnis, valde prominentibus; pronoto brevi, transverso, quam caput haud longiore, parum latiore, ante basin latissimo, tuberculis minutissimis indistinctis remotis interstitiisque glabris nitidissimis ornato, lateribus rotundatis, margine basali fere recta, angulis minime productis; elytris subquadratis, quam caput atque pronotum pariter longis et pariter latis, prope media latissimis, leviter sed confertim asperatis, lateribus rotundatis ad apices contractis, apicibus minime rotundatis; pedibus atque antennis sat magnis, læte flavis. Long. corp. $\frac{4-5}{16}$ lin. = 0·50–0·63 millim.

Head large, rather produced in front, ornamented with very minute indistinct remote tubercles; eyes very large and prominent; antennæ rather large, bright yellow. *Thorax* short, transverse, not longer but rather wider than the head, widest before the base; ornamented with very minute indistinct remote tubercles, with the interstices smooth and shining; sides rounded; basal margin nearly straight, with the angles very little produced. *Scutellum* large, triangular, glabrous. *Elytra* short, subquadrate, not longer or wider than the head and thorax, widest near the middle, faintly but closely asperate; sides rounded, contracted towards the apex; apex very little rounded. *Abdomen* very much exserted, flavescent. *Legs* robust, bright yellow. *Underparts* pale castaneous, the metasternum dusky.

Hab. PANAMA, Bugaba 1000 feet (*Champion* [1]).

Found in plenty at Bugaba.

Differs from all others of the genus in its small size, short convex and rounded form, shining and translucent body, and in sculpture.

19. **Trichopteryx aubæi.**

Trichopteryx aubæi, Matth. Trich. Illustr. p. 117, t. 24. f. 1 (1872) [1]; Trans. Am. Ent. Soc. xi. p. 140 [2].

Elongate oval, moderately convex, brown, rather thickly covered with pale hair; head large, elongate, and much rounded in front; eyes rather prominent; thorax wider but not longer than the head, widest behind the middle, ornamented with very small tubercles in close wavy rows, with the interstices closely reticulate, the sides much rounded, the basal margin straight, with the angles obtuse; elytra rather long, rather wider than and more than half as long again as the head and thorax, widest towards the apex, deeply

and irregularly asperate, the suture rather elevated posteriorly, the apex broad and slightly rounded; legs and antennæ long and slender, bright yellow. Long. corp. 0·75 millim.

Hab. NORTH AMERICA, Washington [2].—GUATEMALA, Cerro Zunil (*Champion* [2]).—CHILI [1].

Differs from other species of the genus in its long and narrow shape, pale brown colour, rounded thorax, and long legs and antennæ.

The following species are unknown to me, and quite unrecognizable from the descriptions:—

Trichopteryx brunneipennis.

Acratrichis brunneipennis, Motsch. Bull. Mosc. xli. part 2, p. 173 [1].

Hab. PANAMA, Obispo (*Motschulsky* [1]).

Trichopteryx lividipennis.

Acratrichis lividipennis, Motsch. Bull. Mosc. xli. part 2, p. 174 [1].

Hab. PANAMA, near the city (*Motschulsky* [1]).

Trichopteryx velutina.

Acratrichis velutina, Motsch. Bull. Mosc. xli. part 2, p. 175 [1].

Hab. ISTHMUS OF PANAMA (*Motschulsky* [1]).

Trichopteryx subglabra.

Acratrichis subglabra, Motsch. Bull. Mosc. xli. part 2, p. 175 [1].

Hab. PANAMA, near the city (*Motschulsky* [1]).

Trichopteryx sylvestris.

Acratrichis sylvestris, Motsch. Bull. Mosc. xli. part 2, p. 176 [1].

Hab. PANAMA, in the forests of the Isthmus (*Motschulsky* [1]).

Trichopteryx convexa.

Acratrichis convexa, Motsch. Bull. Mosc. xli. part 2, p. 178 [1] (nec Matth.).

Hab. ISTHMUS OF PANAMA (*Motschulsky* [1]).

Trichopteryx planulata.

Acratrichis planulata, Motsch. Bull. Mosc. xli. part 2, p. 179 [1].

Hab. ISTHMUS OF PANAMA (*Motschulsky* [1]).

Trichopteryx fenestrata.

Acratrichis fenestrata (Moritz), Motsch. Bull. Mosc. xli. part 2, p. 180 [1].

Hab. Panama (*Motschulsky* [1]).

Trichopteryx pusillima.

Acratrichis pusillima, Motsch. Bull. Mosc. xli. part 2, p. 180 [1].

Hab. Panama, Obispo (*Motschulsky* [1]).

NEPHANES.

Nephanes, Thomson, Skand. Col. i. p. 62 (1859), & iv. p. 100 (1862).

Body oblong, pubescent. *Head* large, sessile, and prominent; eyes generally large. *Thorax* usually small, not dilated at the base. *Scutellum* large, triangular. *Elytra* truncate, generally short. *Wings* long, lanceolate, fringed with long black setæ. *Abdomen* generally much exposed. *Antennæ* 11-jointed, with the two basal joints very large and the intermediate joints slender; club elongate, moniliform. *Palpi*: *maxillary* 4-jointed, with the penultimate joint very large; apical joint long, acicular; *labial* long and slender, arising from elongate processes of the labium, 3-jointed, with the apical joint ovate-acuminate. *Prosternum* rather large; *episterna* large, triangular; *epimera* moderate, enclosing the coxal cavities. *Mesosternum* large, elevated between the coxæ; *episterna* very large, humeral; *epimera* very large, extending to the coxal cavities. *Metasternum* rather short, transverse, extending to the sides of the body; *episterna* narrow, concealed by the elytra, with their interior apical angles alone visible; *epimera* narrow, with their extremities alone visible beyond the metasternum. *Venter* composed of six segments; 1–5 equal to each other in length, the apical segment much longer. *Legs* generally robust; posterior coxæ moderately laminated; tibiæ armed with spurs; tarsi 3-jointed, with the two basal joints very small.

This genus contains four described species, one from Europe and three from North or Central America.

The two species described below are very dissimilar in appearance, but I have not been able to find any anatomical difference of sufficient importance to warrant their generic separation. For this reason I have placed *N. pubescens* in the present genus, although in superficial appearance it differs very much from *N. flaviventris* and from every other species of *Nephanes*.

Body clothed with scattered hairs	*flaviventris*.
Body clothed with dense pubescence	*pubescens*.

1. Nephanes flaviventris.

Elachys flaviventris, Motsch. Bull. Mosc. xli. part 2, p. 183 [1].

Nephanes flaviventris, Matth. Trans. Am. Ent. Soc. viii. p. 142 [2].

Very short, convex, shining, brassy-castaneous, with the shoulders of the elytra rufous, clothed with short pale hair; head moderate; eyes not prominent; thorax rather longer and broader than the head, widest at the middle, closely covered with small tubercles; elytra very short, quadrate, rather shorter and not broader than the head and thorax, contracted towards the apex, the shoulders rufescent, deeply asperate in remote transverse rows; abdomen much exposed, flavescent; legs bright yellow; antennæ dusky, with the two basal joints bright yellow. Length $\frac{4}{16}$ lin. = 0·50 millim.

Hab. North America, New York [1].—Guatemala [2], San Gerónimo (*Champion*).

2. Nephanes pubescens.

Nephanes pubescens, Matth. Trans. Am. Ent. Soc. xi. p. 141 [1].

Oblongus, sat depressus, haud nitidus, castaneus, pilis griseis dense vestitus; capite magno, antice sat producto; oculis modicis, prominentibus; pronoto sat parvo, transverso, quam caput haud longiore vix latiore, tuberculis minutis irregulariter dispositis interstitiisque reticulatis sat nitidis ornato, lateribus leviter rotundatis, pone media latioribus, margine basali fere recta, angulis obtusis; elytris brevibus, quam caput atque pronotum nec longioribus nec latioribus, ordinibus transversis leviter sed confertim asperatis, lateribus fere rectis, ad apices latioribus, apicibus latis fere rectis; abdomine longius exserto, obtuso, dilutiore; pedibus atque antennis longis, late flavis. Long. corp. $\frac{4-5}{16}$ lin. = 0·50–0·63 millim.

Head large and broad, produced in front, closely and minutely tuberculate; eyes moderate and prominent; antennæ long, bright yellow. *Thorax* short, transverse, not longer or wider than the head, covered with small tubercles irregularly arranged, with the interstices reticulate and slightly shining; sides slightly rounded, widest behind the middle; basal margin nearly straight, with the angles rather obtuse. *Scutellum* large, triangular, closely asperate. *Elytra* short, not longer or wider than the head and thorax, closely but lightly asperate in transverse rows; sides almost straight, widest near the apex; apex broad and nearly straight. *Abdomen* paler, long and obtuse. *Legs* long, bright yellow. *Underparts* dusky testaceous, rather deeply reticulate.

Hab. GUATEMALA, Capetillo (*Champion* [1]).

Differs from all other species of *Nephanes* in its longer form and dense pubescence.

PTILIUM.

Ptilium, Erichson, Naturg. Ins. Deutsch. iii. p. 26 (1846); Matthews, Trich. Illustr. p. 93, t. 8 (1872).

Body elongate, pubescent, moderately convex. *Head* generally large and prominent, sometimes sessile; eyes large, often prominent. *Thorax* small, cordate or subquadrate, sometimes slightly constricted near the base, often marked with longitudinal lines on the disc; hinder angles not produced. *Scutellum* large, triangular. *Elytra* long, entire. *Wings* pedunculate, very long and narrow, fringed on each side with long movable setæ. *Abdomen* with the pygidium exposed. *Antennæ* 11-jointed, with the two basal joints large and incrassate, the intermediate generally long and slender, sometimes short, subquadrate, the ninth longer and slightly incrassate, and the last two forming a moniliform club, ornamented with verticillate hairs. *Palpi*: *maxillary* long, 4-jointed, with the third joint very large, ovate-truncate; apical joint acicular, long and slender; *labial* very slender, 3-jointed, with the apical joint very small, ovate. *Prosternum* rather large; *episterna* narrow, trigonal; *epimera* very small, not enclosing the coxal cavities; coxal cavities small and oval. *Mesosternum* moderate, elevated into a triangular carina broad at its base; *episterna* humeral, small and narrow; *epimera* very large and broad, extending to the coxal cavities; coxal cavities oval, oblique. *Metasternum* large, extending to the sides of the body; *episterna* concealed by the elytra, with their interior apical angle alone visible; *epimera* concealed by the elytra, with their extremity slightly visible beyond the metasternum; posterior coxæ slightly separated. *Venter* composed of seven segments, nearly equal to each other in length. *Legs* generally rather short, the posterior pair being much shorter than the rest; coxæ very narrowly laminated; tibiæ often much dilated; tarsi 3-jointed, with the two basal joints very small.

This genus contains a large number of described species from Europe and North America. *Ptilium* may be known by the unusual shortness of the hinder legs and the apparently bi-articulate club of the antennæ. Its species are generally rare and very difficult to find; they are chiefly found under the sappy bark of trees. The three contained in this collection are exceedingly minute, *P. hornianum* being scarcely larger

than *Nanosella fungi*, the smallest coleopteron yet discovered. The following superficial characters will serve to distinguish them from each other:—

Form oblong . . . . . *hornianum.*
Form elongate.
  Antennæ moderate . . . . . *planum.*
  Antennæ very short and robust . . . . . *tropicum.*

1. Ptilium hornianum.

Ptilium hornianum, Matth. Trans. Am. Ent. Soc. xi. p. 143 [1].

Oblongum, convexum, sat nitidum, castaneum, pilis griseis vestitum; capite magno, lato; oculis modicis, prominulis; pronoto parvo, transverso, quam caput breviore vix latiore, nitido, tuberculis exiguis confertim obtecto, ad medium latissimo, lateribus leviter rotundatis, leviter marginatis, margine basali leviter reflexa, angulis fere rectis; elytra oblongis, quam caput atque pronotum parum longioribus, vix latioribus, profunde et reticulatim asperatis, ad media latissimis, lateribus minime rotundatis, apice lato rotundato; pedibus læte, antennis obscure flavis. Long. corp. $\frac{3}{16}$ lin.=0·37 millim.

Head large and broad, rather prominent, shining, closely but finely tuberculate; eyes moderate, rather prominent; antennæ rather long, dusky yellow. *Thorax* small, transverse, shorter and scarcely broader than the head, rather shining, closely but finely tuberculate, widest at the middle; sides a little rounded and faintly margined; basal margin straight, slightly reflexed, with the angles almost rectangular. *Scutellum* small, triangular, closely asperate. *Elytra* oblong, convex, rather longer but scarcely wider than the head and thorax, widest at the middle, deeply and reticulately asperate; sides slightly rounded; apex broad and much rounded. *Abdomen* with the pygidium only exposed and pale. *Legs* moderate, bright yellow. *Underparts* pale castaneous, with the mouth, the hinder part of the metasternum, and the terminal segments of the venter flavescent.

Hab. North America, Texas [1].—Guatemala, El Reposo 800 feet (*Champion*).

Differs from the European *P. rugulosum* in its much smaller size, fainter sculpture, shining surface, and bright yellow legs and antennæ; from all others of the genus in its exceedingly minute size.

2. Ptilium planum.

Ptilium planum, Matth. Trans. Am. Ent. Soc. xi. p. 144 [1].

Elongatum, fere lineare, modice convexum, haud nitidum, ferrugineum, pilis flavis dense vestitum; capite magno, antice producto; oculis magnis, valde prominentibus; pronoto parvo, transverso, quam caput breviore haud latiore, confertim tuberculato, lateribus ante media latioribus ad basin fortiter contractis; elytris longis, angustis, quam caput atque pronotum plus quam sesqui-longioribus, vix latioribus, leviter sed confertim asperatis, apicibus latis rotundatis; pedibus longis, gracilibus, flavis; antennis sat brevibus, læte flavis. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head very large, produced in front, dusky ferruginous, closely and finely tuberculate; eyes large and prominent; antennæ rather short, bright yellow. *Thorax* small, transverse, narrower and not longer than the head, closely and finely tuberculate; sides much contracted towards the base, widest before the middle, and moderately margined; the basal margin nearly straight, with the angles almost rectangular. *Scutellum* large, triangular, closely asperate. *Elytra* elongate oval, scarcely wider but more than half as long again as the head and thorax, finely and closely asperate in transverse rows, with the apex broad and rounded. *Abdomen* with the pygidium only exposed. *Legs* long and slender, yellow. *Underparts* wholly testaceous.

Hab. Guatemala, Capetillo (*Champion* [1]).

This insect differs from the European *P. foveolatum* in its larger size, broader form, plane thorax, and deeper general sculpture; from all other species of the genus in its narrow elongate form and small size.

3. **Ptilium tropicum.** (Tab. III. fig. 23.)

Ptilium tropicum, Matth. Trans. Am. Ent. Soc. xi. p. 144[1].

Sat elongatum, modice convexum, sat nitidum, rufo-testaceum, pilis brevibus flavescentibus vestitum; capite magno, antice rotundato; oculis magnis, prominulis; pronoto parvo, quam caput nec longiore nec latiore, ante medium latissimo, confertim sat fortiter tuberculato, disco interdum leviter impresso, lateribus antice valde rotundatis, postice fortiter contractis, leviter marginatis, margine basali fere recta angulis modicis; elytris quam caput atque pronotum multo longioribus et parum latioribus, apicem versus latissimis, confertim sed levissime asperatis, lateribus leviter rotundatis, apice lato, leviter rotundato; pedibus atque antennis brevibus, robustis, læte flavis. Long. corp. $\frac{4-5}{16}$ lin.=0·50–0·63 millim.

Head large, rounded in front, finely and closely tuberculate; eyes large and prominent; antennæ short, very robust, bright yellow, with the ninth joint incrassate. *Thorax* small, not longer or wider than the head, widest before the middle, closely and rather strongly tuberculate, sometimes with a faint impression on the disc; sides slightly margined, much rounded anteriorly and strongly contracted towards the base; basal margin nearly straight, with the angles moderate. *Scutellum* rather small, triangular, closely asperate. *Elytra* much longer and slightly wider than the head and thorax, widest near the apex, very finely and closely asperate; sides faintly rounded; apex very broad and slightly rounded. *Abdomen* with the pygidium only exposed. *Legs* short, robust, bright yellow. *Underparts* rufo-testaceous, with the mouth and coxæ bright yellow.

Hab. Panama, Bugaba (*Champion*[1]).

Differs from *P. planum* in its smaller size, shorter form, short and very robust antennæ (of which the ninth joint is more incrassate than usual in this genus), and in sculpture.

Found in abundance at Bugaba.

ACTIDIUM.

Actidium, Matthews, Ent. Monthly Mag. v. p. 12 (1868); Trich. Illustr. p. 86, t. 7 (1872).

Body subovate and very shining, or linear and clothed with dense pubescence. *Head* large, sessile, and prominent; eyes generally large and prominent. *Thorax* small, cordate, the base rounded and overlapping the shoulders of the elytra. *Scutellum* rather small, triangular. *Elytra* entire, often very long and narrow. *Antennæ* 11-jointed, generally long, with the two basal joints very large, the intermediate rather slender, and the last three forming a slightly incrassated moniliform club, with the ninth joint much smaller than the tenth. *Palpi*: *maxillary* long, 4-jointed, with the third joint very large, ovate, not truncate, and the fourth aciculate, very slender, and strongly sinuated; *labial* small and slender, 3-jointed, arising from large ovate labial processes; apical joint very small, acutely pointed. *Prosternum* large; *episterna* small and narrow; *epimera* moderate, very distinct, not enclosing the coxal cavities; coxal cavities contingent, open posteriorly. *Mesosternum* long, broadly elevated in the middle, and produced into a sharp point between the coxæ; *episterna* humeral and narrow; *epimera* very large, extending to the coxal cavities; coxal cavities oblique. *Metasternum* very long, not extending to the sides of the body, produced and bidentate between the posterior coxæ; *episterna* very narrow, rather more than half as long as the metasternum; *epimera* narrow, extending rather beyond the metasternum; posterior coxæ long and narrow, not extending to the sides of the body. (In some species the episterna and epimera are concealed by the inflexed sides of the elytra.) *Venter* composed of seven segments, the basal segment being the

longest, the rest equal to each other in length. *Legs* generally short and very robust; tibiæ often strongly dilated; tarsi very short, setose, 3-jointed, with the basal joints often dilated; claws large and long; posterior coxæ faintly laminated.

The species of this interesting genus, generally of rare occurrence, may be known from all other "Ptiliina" by the base of their thorax overlapping the shoulders of the elytra. They are very minute in size, which may in some measure account for their rarity; and are divided into two very distinct groups, one containing those species which are smooth and shining and the other such as are clothed with dense pubescence. The Central-American species belongs to the latter group; it is a very elegant insect, covered with short silvery pubescence.

The few known species inhabit Europe, North America, and New Zealand; they are chiefly found on the sandy banks of streams and on the sea-coast.

1. Actidium fowlerianum.

Actidium fowlerianum, Matth. Cist. Ent. iii. p. 47[1]; Trans. Am. Ent. Soc. xi. p. 146[2].

Elongatum, angustum, obscure castaneum, convexum, vix nitidum, pilis brevibus argenteis dense vestitum; capite magno, obtuso, confertissime tuberculato; oculis parvis, sat prominentibus; pronoto parvo, transverso, quam caput nec longiore nec latiore, confertissime tuberculato, lateribus rotundatis et marginatis, ad basin sat abrupte contractis, margine basali rotundato; elytris elongato-ovatis, sutura apicem versus elevata, lateribus marginatis, apice angusto attenuato; pedibus flavis, antennis obscure flavis. Long. corp. $\frac{3-4}{16}$ lin.= 0·37–0·50 millim.

Head large, obtuse in front, closely covered with tubercles; eyes small, rather prominent; antennæ moderate, rather robust, dusky yellow. *Thorax* small, transverse, not longer or wider than the head, closely covered with tubercles, rather shining; the sides rounded, margined, and rather abruptly contracted at the base; basal margin rounded. *Scutellum* small, triangular, and acuminate. *Elytra* elongate ovate, twice as long but scarcely wider than the head and thorax, closely asperate, with the suture slightly elevated posteriorly; sides margined, widest before the middle, and attenuated towards the apex; apex rounded. *Legs* moderate, bright yellow. *Underparts* castaneous, with the mouth and coxæ yellow.

Hab. GUATEMALA, near the city (*Champion* [1] [2]).

Differs from the other species of the genus in its minute size, elongate and attenuated form, and close sculpture.

Of this distinct and elegant insect some specimens (♂?) are much more attenuated towards the apex of the elytra than others. In an arrangement of the species of the genus it must be placed immediately before the New Zealand *A. lineare*, which it resembles more than any other yet discovered.

Found on the banks of a stream in a "barranca" near the city of Guatemala (*Champion*).

PTENIDIUM.

Ptenidium, Erichson, Naturg. Ins. Deutsch. iii. p. 35 (1846); Matthews, Trich. Illustr. p. 74, t. 6 (1872).

Body more or less ovate, very convex and shining. *Head* large, sessile, and prominent; eyes generally large and prominent. *Thorax* small, transverse, commonly marked with four foveæ near the basal margin. *Scutellum* large, triangular. *Elytra* entire, ovate, generally rather long. *Wings* pedunculate, long and

narrow, fringed on both sides with very long movable setæ. *Antennæ* usually long and slender, 11-jointed, with the two basal joints very large, the intermediate generally very long and slender, and the last three forming an elongate moniliform club, ornamented with long verticillate setæ. *Palpi*: *maxillary* long, 4-jointed, with the third joint very large, ovate, not truncate; apical joint long, acicular, and recurved; *labial* very long and very slender, arising from broad, transverse, labial processes, 3-jointed, with the apical joint small, conical, and acuminate. *Prosternum* moderate; *episterna* small and narrow; *epimera* small and distinct, not enclosing the coxal cavities; coxal cavities oval, contingent, and marginal. *Mesosternum* rather large, elevated into a rather flat, subquadrate carina between the coxæ; *episterna* small, humeral; *epimera* very large, extending to the coxal cavities; coxal cavities circular, separated by the carina. *Metasternum* very large, extending to the sides of the body, moderately produced between the posterior coxæ; *episterna* concealed by the elytra, with their interior apical angles alone visible; *epimera* wholly concealed by the elytra. *Venter* composed of seven segments nearly equal to each other in length, the apical segment simple (the apical abdominal segment is sometimes dentate at its apex, but this is only visible on the underside). *Legs* generally long and slender, with the posterior coxæ small and very slightly laminate; tibiæ sometimes dilated; tarsi 3-jointed, with the two basal joints very minute, and the third very long and very slender.

The species of *Ptenidium* are readily distinguished from all other Trichopterygidæ by their ovate, very convex form, and brightly polished surface. Among the new species discovered by Mr. Champion, *P. strangulatum* is remarkable for the excessive contraction of the base of the thorax and of the shoulders of the elytra—at the point of junction of these parts its body is as nearly divided into two as are the articulations of the club of its antennæ; but in other respects it does not anatomically differ from its congeners.

Ptenidium contains a large number of described forms, mostly from Europe or North America. The following table will assist in the identification of the Central-American species known to me:—

Shoulders of the elytra strongly contracted . . . . . *strangulatum.*
Shoulders of the elytra not contracted.
  Base of the thorax with four foveæ.
    Thoracic foveæ very small . . . . . *obesum.*
    Thoracic foveæ large.
      Scutellum deeply punctured . . . . . *foveatum.*
      Scutellum scarcely punctured . . . . . *ignobile.*
  Base of the thorax without foveæ.
    Colour deep black; size large . . . . . *nitens.*
    Colour rufo-piceous; size small . . . . . *impunctatum.*

1. Ptenidium strangulatum.

Ptenidium strangulatum, Matth. Trans. Am. Ent. Soc. xi. p. 148[1].

Elongatum, ad humeros strangulatum, valde convexum, glabrum, nitidissimum, nigrum; capite magno, antice producto; oculis magnis, prominentibus; pronoto parvo, transverso, quam caput parum latiore haud longiore, ante medium latiore, ad basin fortissime contracto, glabro, nitidissimo, foveis quatuor equidistantibus valde indistinctis ad basin atque duabus utrinque ad angulum basalem pariter indistinctis notato, lateribus late marginatis, valde rotundatis; elytris ovatis, convexissimis, ad humeros atque apices pariter et valde attenuatis, ante media latioribus, nigris, apicibus atque humeris rufis, glabris, nitidissimis, stria abbreviata remote punctata ad suturam utrinque impressis, apice modice rotundato; pedibus gracilioribus, læte flavis; antennis modicis, flavis, clavis obscurioribus. Long. corp. $\frac{5-7}{16}$ lin. = 0·75–0·87 millim.

Head large, produced in front, very smooth and shining, ornamented with a few minute remote punctures; eyes large and prominent; antennæ moderate, yellow, with the club dusky. *Thorax* rather small, transverse, very strongly contracted at the base, rather wider but not longer than the head, very smooth and shining, with four very indistinct equidistant foveæ near the base, and two or three others equally indistinct on each side behind the middle; the sides rounded and strongly margined; posterior margin very short, depressed, and nearly straight. *Scutellum* very elongate, triangular, marked with a few minute punctures. *Elytra* ovate, much wider than and almost twice as long as the head and thorax, widest near the middle, with the shoulders and apex strongly and equally attenuated, very smooth and shining, black, the shoulders and apex rufous, with a row of distant punctures on each side of the anterior half of the suture terminating in a short convergent line, the apex rather narrow and rounded; the epipleuræ unusually broad and deep. *Legs* rather long, bright yellow, with the tarsi very small. *Underparts* black, with the coxæ, the posterior margin of the segments of the abdomen, and the whole of the terminal segment flavescent.

Hab. GUATEMALA, Capetillo (*Champion* [1]).

Differs from all the other species of the genus in its strangulated form and very shining surface.

This remarkable insect scarcely appears at first sight to be a true *Ptenidium*; but after a careful examination I cannot discover that it differs in any anatomical character. It must, however, be placed the first in order, as it approaches *Actidium* in the general form of its body.

Found not uncommonly at Capetillo.

2. **Ptenidium obesum.**

Ptenidium obesum, Matth. Trans. Am. Ent. Soc. xi. p. 151 [1].

Breve, obesum, validissime convexum, glabrum, nitidissimum; capite sat brevi, latissimo; oculis magnis, vix prominentibus; pronoto modico, transverso, quam caput parum longiore et multo latiore, valde convexo, glaberrimo, nitidissimo, punctis quatuor parvis equidistantibus ad basin, et duobus ad marginem anteriorem notato, lateribus valde rotundatis, vix marginatis, ad media latioribus, angulis posticis obtusis; elytris brevibus ovatis, validissime convexis et glabris, quam caput atque pronotum parum longioribus vix latioribus, ante media latioribus, lateribus leviter marginatis, apice valde obtuso; pedibus flavis; antennis obscure flavis. Long. corp. $\frac{7}{16}$ lin. = 0·87 millim.

Head short and broad, very smooth and shining; eyes large, scarcely prominent; antennæ short, yellow, dusky towards the club. *Thorax* moderate, transverse, rather longer and much wider than the head, very convex, smooth, and shining, with four minute equidistant punctures near the base and two near the middle of the anterior margin; sides much rounded and slightly margined, widest near the middle; basal margin straight, with the angles very obtuse. *Scutellum* short and broad, rather abruptly acuminated towards the apex. *Elytra* short ovate, exceedingly convex, smooth and shining, rather longer but scarcely wider than the head and thorax, the sides slightly margined, widest before the middle, the apex very obtuse. *Legs* moderate, dark yellow. *Underparts* black, with the mouth and coxæ piceous.

Hab. GUATEMALA, Dueñas (*Champion* [1]).

This insect differs from its allies in its exceedingly convex and short form, almost impunctate surface, and short antennæ.

3. **Ptenidium foveatum.**

Ptenidium foveatum, Matth. Trans. Am. Ent. Soc. xi. p. 149 [1].

Obtuse ovatum, piceo-nigrum, nitidissimum, valde convexum; capite magno, lato; oculis magnis, sat prominen-

tibus; pronoto modico, quam caput parum longiore et latiore, glabro, nitidissimo, punctis minutis remotis in disco, foveis quatuor magnis equidistantibus ad basin atque duabus minoribus ad marginem anteriorem notato, lateribus marginatis et rotundatis, margine basali recta angulis obtusis; scutello magno, foveis quatuor magnis ad basin, duabus minoribus ad medium atque una ad apicem notato; elytris sat brevibus, quam caput atque pronotum parum longioribus et latioribus, ante medio latioribus, perglabris, nitidissimis, stria suturali punctorum remotorum utrinque notatis; pedibus atque antennis læte flavis. Long. corp. $\frac{5-6}{16}$ lin.=0·63–0·75 millim.

Head large and broad, very smooth and shining, with three large punctures placed in an oblique line near the eye on each side; eyes large and prominent; antennæ long, robust, bright yellow. *Thorax* moderate, rather longer and wider than the head, very convex, smooth and shining, with four deep equidistant foveæ at the base and two smaller foveæ near the middle of the anterior margin; sides rounded and margined; basal margin nearly straight, with the angles obtuse. *Scutellum* large, triangular, with four deep punctures at the base, two smaller punctures near the middle, and one near the apex. *Elytra* short, scarcely longer or wider than the head and thorax, very convex and shining, with a single puncture on each side near the scutellum, and a stria of remote punctures on each side of the suture, the sides rounded and margined, widest before the middle, the apex rather attenuated. *Legs* rather long, very bright yellow, with the tibiæ rather dilated towards the apex. *Underparts* black, with the mouth and coxæ bright yellow and the abdomen piceous.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Aceytuno (*Champion* [1]).

This species is distinguished by its short ovate form, and by the peculiar sculpture of the scutellum.

4. Ptenidium ignobile.

Ptenidium ignobile, Matth. Trans. Am. Ent. Soc. xi. p. 149 [1].

Ovale, sat elongatum, piceo-nigrum, glabrum, nitidissimum; capite magno, in fronte sat producto; oculis magnis, prominentibus; pronoto modico, quam caput parum latiore vix longiore, glabro, nitidissimo, foveis quatuor magnis profundis ad basin notato, lateribus modice rotundatis et marginatis, ad media latioribus, margine basali recta angulis obtusis; elytris ovalibus, quam caput atque pronotum longioribus haud latioribus, impunctatis, nitidis, ante media latioribus, ad apicem attenuatis, apice dilutiore; pedibus atque antennis sat longis, læte flavis. Long. corp. $\frac{5}{16}$ lin.=0·63 millim.

Head large, rather produced in front, shining, and impunctate; eyes very large and prominent; antennæ long, bright yellow. *Thorax* moderate, somewhat quadrate, wider but not longer than the head, smooth and shining, with four large and very deep equidistant foveæ near the base, the sides a little rounded and slightly margined, widest near the middle, the basal margin straight, with the angles obtuse. *Scutellum* large, triangular, with four small foveæ at the base. *Elytra* oval, rather narrow, longer but not wider than the head and thorax, shining, impunctate, widest before the middle, attenuated towards the apex, the apex paler. *Legs* rather long, bright yellow. *Underparts* piceous, with the mouth, coxæ, and the apex of the abdomen yellow.

Hab. Guatemala, near the city (*Champion* [1]).

Differs from its congeners in its small size, narrow form, four large and deep thoracic foveæ, and shining impunctate surface.

5. Ptenidium nitens.

Ptenidium nitens, Matth. Trans. Am. Ent. Soc. xi. p. 149 [1].

Ovale, elongatum, valde convexum, nitidissimum, glabrum, aterrimum; capite magno, prominente; oculis magnis, prominulis; pronoto modico, quam caput latiore et parum longiore, valde convexo, nitidissimo, punctis exiguis indistinctis remotis notato, foveis basalibus nullis, ad basin latissimo, lateribus modice rotundatis,

vix marginatis, margine basali leviter convexa angulis obtusis; elytris ovatis, quam caput atque pronotum longioribus, haud latioribus, ante media latissimis, valde convexis, nitidissimis, fere glabris, punctis paucis indistinctissimis notatis, apice rotundato; pedibus atque antennis modicis, læte flavis. Long. corp. $\frac{8}{16}$ lin.=1 millim.

Head large, rounded in front, shining, glabrous, impunctate; eyes large and prominent; antennæ moderate, bright yellow. *Thorax* moderate, rather longer and wider than the head, widest at the base, very convex and shining, with a few very indistinct minute punctures on the disc, but no basal foveæ; sides moderately rounded, scarcely margined; basal margin slightly convex, with the angles obtuse. *Scutellum* large, triangular, glabrous. *Elytra* ovate, rather longer but scarcely wider than the head and thorax, widest before the middle, glabrous and shining, with a few very indistinct minute punctures; sides faintly margined; apex obtuse, fuscescent. *Legs* moderate, bright yellow. *Underparts* black, with the mouth and the coxæ yellow.

Hab. NICARAGUA, Chontales (*Janson* [1]).

One specimen.

This insect differs from *P. bruckii*, Matth., in the absence of the basal foveæ of the thorax; from others of the genus in its shining glabrous surface.

6. **Ptenidium impunctatum.**

Ptenidium impunctatum, Matth. Trans. Am. Ent. Soc. xi. p. 150[1].

Elongato-oblongum, piceum, valde convexum, nitidissimum; capite magno, lato, oculis magnis; pronoto sat magno, transverso, quam caput latiore haud longiore, valde convexo, impunctato, glabro, nitidissimo, lateribus rotundatis et marginatis, margine basali recta angulis obtusis; elytris ovatis, obtusis, quam caput atque pronotum angustioribus vix longioribus, convexis, nitidissimis, fere impunctatis, lateribus marginatis ad media latioribus, apice obtuso late rufescente; pedibus atque antennis modicis, læte flavis. Long. corp. $\frac{6-7}{16}$ lin.=0·75–0·87 millim.

Head large and broad, shining, impunctate; eyes large, moderately prominent; antennæ rather short, robust, bright yellow. *Thorax* large, transverse, wider but not longer than the head, convex, impunctate, and very shining; sides margined and rounded; basal margin straight, with the angles obtuse. *Scutellum* moderate, triangular. *Elytra* ovate, obtuse, narrower but scarcely longer than the head and thorax, widest near the middle, convex, very shining, and impunctate; sides margined; apex obtuse, broadly rufous. *Legs* moderate, bright yellow. *Underparts* piceous, with the head, mesosternum, coxæ, and abdomen flavescent.

Hab. GUATEMALA, near the city, Capetillo, San Gerónimo (*Champion* [1]).

Differs from others of the genus in its broad head and thorax, narrow elytra, and impunctate surface.

Found not uncommonly by Mr. Champion.

The following species is unrecognizable from the description:—

Ptenidium fuscipennis.

Ptenidium fuscipennis, Motsch. Bull. Mosc. xli. part 2, p. 190[1].

Hab. ISTHMUS of PANAMA (*Motschulsky* [1]).

NANOSELLA.

Nanosella, Motschulsky, Bull. Mosc. xli. part 2, pp. 172, 187 (1868); Matthews, Trans. Am. Ent. Soc. xi. p. 153 (1884).

Body exceedingly minute, cylindrical, elongate linear, pubescent. *Head* large, sessile, and prominent; eyes placed far back, prominent. *Thorax* large, subquadrate, widest at the base, with the posterior angles rectangular. *Scutellum* moderate, triangular. *Elytra* entire, very long, and linear. *Abdomen* with the pygidium exposed. *Antennæ* very short and robust, 11-jointed—1 and 2 very large; 3–7 subquadrate, robust; 8 larger than 7, cyathiform; 9–11 forming a biarticulate, rather solid, and very much incrassated club, of which the two basal joints are amalgamated, but very evident, and the apical joint very large, obtusely conical, and furnished with a whorl of short setæ beyond the middle. (*Parts of the mouth* not dissected.) *Prosternum* very short; *episterna* rather large, triangular; *epimera* small, not enclosing the coxal cavities; coxal cavities contingent, semiexcised, open behind. *Mesosternum* short, elevated in the middle, and produced into an acute point between the coxæ; *episterna* small, humeral; *epimera* very large, extending to the coxal cavities; coxal cavities oval, oblique. *Metasternum* large, quadrate, extending to the sides of the body, produced into a short acute point between the posterior coxæ; *episterna* concealed by the elytra, with their interior apical angles alone visible; *epimera* concealed by the elytra, with their extremities minutely visible beyond the metasternum. *Venter* composed of six segments, of which the basal and apical are much longer than either of the others, the apical segment simple. *Legs* short; tibiæ moderately dilated; tarsi short, 3-jointed, the basal joint much larger than the second, the third very long and slender; posterior coxæ large, and very broadly laminated.

This genus differs widely from every other of the Trichopterygidæ in the shortness and peculiar form of its antennæ, and in the cylindrical and linear shape of the whole body. Motschulsky's diagnosis of the genus *Nanosella*, although, like all his other descriptions, far too brief, is very accurate and intelligible. The single known species inhabits the United States and Central America.

1. Nanosella fungi.

Nanosella fungi, Motsch. Bull. Mosc. xli. part 2, p. 187, t. 8. f. 3[1]; Matth. Trans. Am. Ent. Soc. xi. p. 154[2].

Linear, very long, subcylindric, testaceous, clothed with short yellow pubescence; head large and prominent; eyes large, placed far back; thorax rather longer and wider than the head, widest at the base, moderately but closely tuberculate, the basal margin nearly straight, with the angles nearly rectangular; elytra very long and narrow, not broader, but more than twice longer than the head and thorax, rather faintly and closely tuberculate, the sides nearly parallel, the apex slightly rounded; legs and antennæ short, pale yellow. Length $\frac{2}{16}$ lin. = 0·25 millim.

Hab. North America, Georgia (*Motschulsky* [1 2]).—Guatemala, San Juan in Vera Paz (*Champion*).

Of this interesting species, the smallest known coleopteron, one example was found by Mr. Champion in Guatemala.

THROSCIDIUM.

Throscidium, Matthews, Trich. Illustr. p. 64 (1872); Trans. Am. Ent. Soc. xi. p. 154, t. 3 (1884).

Body elongate oval, convex, pubescent. *Head* rather large, sessile, deflexed; eyes moderate, prominent. *Thorax* large, with the posterior angles acute and produced. *Scutellum* moderate, triangular. *Elytra* entire, long, obtusely rounded at the apex. *Abdomen* with the pygidium exposed, sometimes acutely

dentate. *Wings* pedunculate, long and narrow, fringed on both sides with long movable setæ. *Antennæ* long and slender, 11-jointed, with the two basal joints very large, the intermediate very long and very slender, and the last three forming a much incrassated moniliform club, ornamented with long verticillate hairs. *Palpi*: *maxillary* large, 4-jointed, with the third joint very large, ovate, not truncate; apical joint rather small, acicular, and sinuated; *labial* short and robust, with the labial processes short, transverse, 3-jointed, with the apical joint ovate. *Prosternum* very short; *episterna* small and narrow; *epimera* small and distinct, not enclosing the coxal cavities; coxal cavities large, contingent, open behind. *Mesosternum* moderate, elevated into a long carina, extending from the collum to beyond the coxal cavities; *episterna* small and narrow; *epimera* very large and broad, extending to the coxal cavities; coxal cavities large and round, separated by the carina. *Metasternum* large, transverse, extending to the sides of the body, and produced between the posterior coxæ into an acute point; *episterna* covered for the most part by the elytra, but with their interior apical angles broadly inflexed below the mesosternum; *epimera* concealed by the elytra, with their extremities only visible below the metasternum. *Venter* composed of seven segments, of which the last two are separately longer than either of the preceding segments; apical segment simple. *Legs* moderate; posterior coxæ very large, and broadly laminated; tibiæ setose, armed with long spurs; tarsi 3-jointed, with the two basal joints large, the third very long and slender.

Throscidium is distinguished from *Nossidium* by the more elongate form of the body, and the produced posterior angles of the thorax, as well as by the great dissimilarity of the whole underside of the external skeleton. Its Central-American exponent, *T. invisibile*, was described by Nietner as a species of *Trichopteryx*, and is quoted as such in the 'Trichopterygia Illustrata;' but from the examination of more recent captures I feel convinced that it belongs to the present genus. The two other known species are both from Chili.

1. **Throscidium invisibile.** (Tab. III. fig. 25.)

Trichopteryx invisibilis, Nietner, Ann. & Mag. Nat. Hist. 2nd ser. xix. p. 379[1]; Matth. Trich. Illustr. p. 121, t. 24. f. 10[2]; Cist. Ent. iii. p. 45[3].

Acrotrichis invisibilis, Wollast. Col. Hesperid. p. 54[4].

Throscidium invisibile, Matth. Trans. Am. Ent. Soc. xi. p. 154[5].

Acratrichis elongatula, Motsch. Bull. Mosc. xli. part 2, p. 180[6].

Elongate oval, moderately convex, translucent livid-castaneous, rather thickly clothed with short sericeous hair; head large and prominent; eyes small and prominent; thorax moderate, slightly dilated posteriorly, ornamented with minute tubercles arranged in rows, straight on the disc but curved at the sides, with the interstices faintly reticulated, and also with a smooth and shining space at the base, the basal margin slightly sinuated, with the angles nearly rectangular; elytra long, not broader than but half as long again as the head and thorax, rather deeply and reticulately asperate; abdomen with the pygidium only exposed; legs and antennæ pale yellow, the former long and robust, with the basal joints of all the tarsi incrassated. Length $\frac{4}{16}$ lin. = 0·50 millim.

Hab. Guatemala[5], San Gerónimo (*Champion*[3]); Isthmus of Panama (*Motschulsky*[3 5 6]).—Ceylon[1 2 3]; Cape Verde Islands[2 3 4].

This species, found by Mr. Champion near San Gerónimo, Guatemala, appears to be widely distributed in the tropical zone; it was first discovered by Nietner in Ceylon, and subsequently found by Wollaston in the Cape Verde Islands and by Colonel Motschulsky near Panama; the last-named illustrious entomologist describing it under the name of *Acratrichis elongatula*.

The specimens from Central America, as well as those from the Cape Verde Islands, are rather smaller and paler in colour than those found in Ceylon; but resemble them entirely in form, and in the very peculiar sculpture of the thorax and elytra.

The following genera and species recorded by Motschulsky from Central America are not contained in the present collection *:—

MYRMECOTRICHIS.

Myrmecotrichis, Motschulsky, Etudes ent. 1855, p. 17; Bull. Mosc. xli. part 2, p. 181 (1868).
Myrmicotrichis, Matthews, Trich. Illustr. p. 150, t. 14 (1872).

1. Myrmecotrichis æquatorialis.

Myrmecotrichis æquatorialis, Motsch. Bull. Mosc. xli. part 2, p. 182, t. 8. fig. 1[1].
Myrmicotrichis æquatorialis, Matth. Trich. Illustr. p. 152, t. 23. fig. 9.

Obconic, flavescent, clothed with short golden hair; thorax strongly arcuate, with the hinder angles exceedingly produced; elytra narrower than the head and thorax, much attenuated posteriorly, the apex truncate; abdomen much exposed; legs and antennæ short, robust. Length 0·75 millim.

Hab. Panama (*Motschulsky* [1]).

In the nests of *Œdecnemia hystrix*, Latr. [1]

2. Myrmecotrichis subvittata.

Myrmecotrichis subvittata, Motsch. Bull. Mosc. xli. part 2, p. 182[1].

Hab. Isthmus of Panama (*Motschulsky* [1]).

This insect is unknown to me; it is possibly the female of *M. æquatorialis*.

CISSIDIUM.

Cissidium, Motschulsky, Etudes ent. 1855, p. 17; Bull. Mosc. xli. part 2, p. 189 (1868).

This genus is unknown to me.

1. Cissidium basale.

Cissidium basale, Motsch. Bull. Mosc. xli. part 2, p. 190, t. 8. f. 5[1].

Hab. Isthmus of Panama (*Motschulsky* [1]).

2. Cissidium rufescens.

Cissidium rufescens, Motsch. Bull. Mosc. xli. part 2, p. 190[1].

Hab. Isthmus of Panama (*Motschulsky* [1]).

* *Micridium lineatum*, Motsch., by an oversight, has been recorded by me (Trans. Am. Ent. Soc. xi. p. 153) as from Central America; the locality given by Motschulsky is "North America."

MILLIDIUM.

Millidium, Motschulsky, Etudes ent. 1855, p. 18; Bull. Mosc. xli. part 2, p. 189[1]; Matthews, Trich. Illustr. p. 90, t. 7 *a* (1872).

1. Millidium sculpturatum.

Millidium sculpturatum, Motsch. Etud. ent. 1855, p. 18; Bull. Mosc. xli. part 2, p. 189[1].

Hab. Central America[1].

Unknown to me.

2. Millidium triramosum.

Millidium triramosum, Motsch. loc. cit. p. 18; loc. cit. p. 189[1]; Matth. Trich. Illustr. p. 93, t. 29. fig. 5.

Elongate oval, very smooth and shining, rufo-piceous; thorax strongly constricted near the base, with three deep, parallel sulci on the disc, and a short sulcus near each posterior angle; elytra shining, almost impunctate; legs and antennæ pale yellow. Length 0·50 millim.

Hab. Central America[1].

Fam. SPHÆRIIDÆ *.

The Sphæriidæ form a small and somewhat isolated family, exhibiting no obvious affinity to any other group except the Sphæridiidæ (which are included with the Hydrophilidæ by Dr. Sharp in the preceding volume of this series); and to this group almost solely by the subsolid capitulum of the antennæ, and the usually hemispheric form of their body. Their systematic position has therefore been a fertile cause of perplexity. They were once supposed to be in some way connected with the Trichopterygidæ; but their free anterior coxæ, and the whole anatomy of their external skeleton, together with their diversely formed antennæ, render such an alliance impossible. It seems on the whole much more natural to place the Sphæriidæ immediately after the Sphæridiidæ. The subsolid, and in some species almost orbicular, capitulum of their antennæ, their elongate and free or prominent anterior coxæ, and often the hemispheric form of their body, all appear to indicate a decided affinity to *Cercyon*. Their life-habits, so far as they are known, appear also to be somewhat similar, as they are usually found in damp boggy places at the roots of herbage, or in moss.

Although the species of *Sphærius* are not very numerous in collections, I believe that in nature they are by no means rare; I have received them from many parts of North America, and from Central America, Spain, and North Africa, as well as from three localities in Great Britain. Thus they seem to be generally distributed throughout the countries north of the Equator; but hitherto have not, so far as I know, been found in the southern hemisphere.

* By A. Matthews.

SPHÆRIUS.

Sphærius, Waltl, Isis, iv. p. 272 (1838).

Microsporus, Kolenati, Melet. Ent. v. p. 64 (1846).

Body exceedingly convex, often hemispheric. *Head* large, sessile, the mouth produced, the gular portion convex; eyes large, not prominent. *Antennæ* 11-jointed—1 very large, turgidly incrassate; 2 large and incrassate, smaller than 1; 3 very long and very slender; 4, 5, 6 slightly incrassate, nearly equal to each other; 7 and 8 much smaller than 6; 9–11 much incrassated, forming a subsolid club, either ovate or orbicular, furnished with long setæ. *Maxillary palpi* long, 4-jointed—1 small; 2 very long and very slender, slightly incrassated towards the apex; 3 large and much incrassate, ovate, with the apex truncate; 4 small and slender, contracted towards the middle, and dilated at the base and apex, the apex flat. *Labial palpi* cylindrical, very small and slender; 3-jointed—1 small and short, quadrate; 2 more than twice as long as 1, but not broader; 3 short, more slender than 2, truncate at the apex. *Labrum* large, suboblong, widest at the base, slightly rounded in front. *Mandibles* bipartite; the apical portion formed of a strong, roundly incurved, simple hook, and the basal portion abruptly incrassated, and produced on the inner side into an obtuse elevated point. *Maxillæ* feebly bilobed; the outer lobe thin and flat, with the apex acutely pointed and sparingly setose; inner lobe nearly as long as the outer lobe, slender, and armed with a few setiform teeth at the apex; stipes large and strong. *Mentum* very large, suboblong, widest at the base, strengthened with broad lateral costæ; all the angles rounded. *Labium* short, transversely oblong, with broad lateral costæ. *Lingua* rather large, fan-shaped, ciliated on its anterior margin, as long as the labial palpi. *Pronotum* short, transverse, widest at the base. *Scutellum* generally large, triangular. *Elytra* entire. *Wings* very large, not pedunculate, with very strong neuration; the lower main nerve much incurved towards the middle of the wing, with its extremity broadly dilated; the lower margin of the wing fringed with setiform hairs. *Abdomen* composed of seven segments, all coriaceous; segment 7 much longer and more corneous than 6, with a deep and broad conical impression, the apex of which is on the fourth segment and its base on the extreme margin of the seventh. (This description was made from *S. acaroides*.) *Prothorax* short; *prosternum* carinated, the carina dilated posteriorly; *episterna* distinct; *epimera* small, partly inclosing the coxal cavities; coxal cavities large, oval, partly open behind. *Pectus* with the *mesosternum* very short; *episterna* long and narrow; *epimera* small and narrow, extending to the coxal cavities; coxal cavities large, elongate oval, abruptly excavated at the outer extremity, and very widely separated from each other. *Metasternum* very large, nearly extending to the sides of the body, the basal margin excavated on each side; *episterna* small and narrow, not reaching to the coxæ; *epimera* long and narrow, extending to the coxæ. *Venter* composed of five segments—1 very long and large; 2 and 3 very short; 4 and 5 very long; apical segment entire. *Legs*: *anterior* with the trochanters very short; femora large and very robust, deeply grooved on the underside, with the edges of the groove produced near the middle into an acute angle; tibiæ broadly dilated, widest near the middle, deeply excised on the outer side towards the apex, armed at the commencement of the excision with short spines; tarsi robust, simple, 3-jointed—1 long, cylindrical, appearing like two amalgamated joints, 2 like the first, but much smaller, 3 elongate; claws moderate, simple; *intermediate* like the anterior, but with the femora grooved only on the apical half; tibiæ less dilated and simple, with a short spur at the apex on the inner side; *posterior* much smaller than the preceding; trochanters very large, fusiform; femora simple; tibiæ simple, setose and dentate on the inner side, with several short spurs at the apex. *Coxæ*: *anterior* long and narrow, prominent, divided by the carina; *intermediate* small, oval, widely separated; *posterior* enormously large, extending to the fourth ventral segment, contingent, and reaching to the sides of the body, slightly laminated on the outer side.

1. **Sphærius tropicus**, sp. n.

Ovatus, validissime convexus, nitidissimus, totus impunctatus, glaberrimus, aterrimus; capite magno, antice producto; oculis magnis, haud prominentibus; pronoto parvo, brevi, ad basin latissimo, lateribus fere rectis, margine basali fere recta angulis vix acutis; elytris quam caput atque pronotum latioribus et longioribus, prope media latissimis, lateribus modice rotundatis, late marginatis; pedibus atque antennis flavis, harum capitulo orbiculari. Long. corp. $\frac{5}{16}$ lin. = 0·63 millim.

Body ovate, exceedingly convex, deep black, very smooth and very shining, impunctate. *Head* large, much

produced in front; eyes large, not prominent; antennæ moderate, yellow, with the capitulum round. *Thorax* short and small, widest at the base; sides nearly straight; basal margin nearly straight, with the angles almost rectangular. *Scutellum* moderate, triangular. *Elytra* broader and longer than the head and thorax, widest near the middle; sides moderately rounded and broadly margined; apex ovate. *Legs* moderate, yellow. *Underparts* wholly piceous.

Hab. GUATEMALA, near the city (*Champion*).

Differs from *S. hispanicus* in its more ovate form, much larger head, and smaller thorax; and in the orbicular capitulum of its antennæ.

Fam. SCAPHIDIIDÆ*.

The Scaphidiidæ form a distinct and congruous family, distinguished by the peculiar shape of many parts of their external skeleton. The most conspicuous characters are the form of the anterior and intermediate coxal cavities; the protrusion of the side-pieces of the mesosternum beyond the normal outline of the skeleton; and (except in *Scaphium*) the reception of the posterior angles of the thorax into grooves on the epipleural fold of the elytra. The anterior coxal cavities are formed on their upper half by the prosternum and on their lower half by the mesosternum, and the intermediate coxal cavities extend in a similar manner into the metasternum. The mesosternum itself is often largely developed, while the side-pieces are unusually small; the epimera are short, sometimes linear, and do not reach more than halfway to the coxal cavities, but are produced at their outer extremity beyond the outline of the body; the side-pieces of the metasternum are on the contrary large, and in some genera very broad.

The organs of the mouth are in all the genera fully developed, and appear to indicate that the Scaphidiidæ feed exclusively on vegetable matter. The lingua is very large and conspicuous. The labium follows the mentum, proceeding from its inner side near the base, and bearing at its anterior extremity the labial palpi; in the Scaphidiidæ this organ is short, and only extends slightly beyond the front of the mentum. From the inside of the labium near its base the lingua arises: it varies much in shape, but is more or less uniform in each separate family; in the Scaphidiidæ it is narrow at the base, immensely dilated anteriorly, rounded at the sides, and generally emarginated in front. On the inner side of the lingua the paraglossæ are placed: they are also variable in shape, and in some families rudimentary or deficient; in the Scaphidiidæ they are linear divergent lobes, often of considerable size, and fringed on their inner side with long, curved, setiform hairs. Each of these parts, the labium, lingua, and paraglossæ, are distinct and separate organs of the mouth, and may be dissected from each other without difficulty in the larger species of *Scaphidium*.

In *Toxidium* and *Scaphisoma* the labial palpi are distinctly 4-jointed—a formation which I have long believed to exist in some genera not belonging to the Scaphidiidæ,

* By A. MATTHEWS.

but have not yet found so clearly defined as it is in these two. My descriptions of the generic anatomy have all been taken from fresh preparations made expressly for the present work.

The genus *Scaphium*, which is not represented in our region, differs from every other which I have examined in having the base of the pronotum incumbent on the shoulders of the elytra, with the posterior angles entirely rounded off.

Since the publication of Gemminger and Harold's catalogue a very large number of species of this family have been described (no less than forty in *Scaphidium* alone) by Reitter, Réné Oberthür, and others.

Most of the genera appear to be very widely distributed.

The different species frequent fungoid growths on decaying timber.

SCAPHIDIUM.

***Scaphidium*, Olivier, Ent. ii. 20, p. 1 (1791).**

Antennæ 11-jointed—1 and 2 moderately large; 3 longer than the rest, very slender; 4 and 5 very slender, shorter than 3; 6 incrassated towards the apex; 7–11 moderately incrassated, forming an elongate submoniliform club. *Maxillary palpi* slender, 4-jointed—1 very small; 2 and 3 moderate, subcylindric, widest towards the apex; 4 much longer than 3, conical. *Labial palpi* moderate, subcylindric, 3-jointed—1 small; 2 moderate; 3 obtusely conic, incurved. *Labrum* transverse, much dilated, rounded, and broadly transparent at the sides, deeply emarginate in front, with a few strong setæ on the disc, and setose on the inside. *Epistoma* very distinct. *Mandibles* very robust, bifid at the apex, furnished with a ciliated appendage in front. *Maxillæ* robust, bilobed; outer lobe short and broad, densely fringed with setæ at the apex; inner lobe robust, with incurved setæ at the apex. *Mentum* rather large, nearly quadrate, with the anterior margin rounded. *Labium* very short, subquadrate, not projecting beyond the mentum. *Lingua* transverse, much expanded anteriorly, the sides not rounded but slightly concave, strongly concave in front, setose on the inside, with a very strong medial costa. *Prosternum* large; *episterna* very distinct, large, and triangular; *epimera* large and broad, rather short. *Mesosternum* strongly carinated between the anterior coxæ; *episterna* small, produced at their outer extremity; *epimera* small and narrow, produced at their outer extremity, and widely remote from the coxal cavities. *Metasternum* rather long, divided by a deep medial suture, much depressed posteriorly, each side of the posterior margin much rounded, and sometimes densely covered with hair; *episterna* moderate, rather narrow, not extending to the coxæ; *epimera* very large and broad, much inflected beyond the episterna. *Venter* composed of six segments—1 and 5 long; 2, 3, 4, 6 short. *Legs* generally long and slender; tarsi 5-jointed—1 the longest. *Coxæ*: *anterior* nearly contingent, prominent; *intermediate* rather widely distant; *posterior* remote.

This genus contains about sixty-five described species, and is very widely distributed, though more numerously represented in tropical than in temperate regions.

I have to notice eight species from Central America; six of these are described as new.

Epitome of the Species.

L. c. 6 mm. Ovate, rather depressed, remotely punctured, red, with two spots on the thorax and the disc of the elytra black; legs red, with the tibiæ black; antennæ slender, red, with the club black . . . . . *marginatum.*

L. c. 5 mm. Broadly ovate, not depressed, faintly punctured, entirely red; thorax with the basal row of punctures distinct; legs red; antennæ red, the club black *unicolor.*

L. c. 5 mm. Broad, ovate, bright red, lightly punctured, much depressed near the suture; no basal row of punctures on the thorax; legs bright red, often with the tibiæ and femora black . . . . . *mexicanum.*

L. c. 5·50 mm. Ovate, slightly depressed, indistinctly punctured, alutaceous, flavescent; no basal row of punctures on the thorax; apex of the femora and the whole of the tibiæ black . . . . . *geniculatum.*

L. c. 4·75 mm. Short, subovate, rufescent, with the thorax spotted and the elytra fasciated with black; basal row of punctures on the thorax deep; legs and antennæ long and slender, flavescent . . . . . *variabile.*

L. c. 2·50 mm. Ovate, rather depressed, yellow, with short black lines on the thorax and black spots on the elytra, nearly smooth; no basal row of punctures on the thorax; legs and antennæ rufescent, the tibiæ dusky . . . . . *lineaticolle.*

L. c. 5 mm. Broadly ovate, rather depressed, the thorax rufo-piceous; elytra red, with a large transverse spot on each near the middle, and their extremities broadly black; legs long, nigro-piceous; antennæ rufescent, with the club black *transversale.*

L. c. 5 mm. Entirely black, ovate, rather depressed, very shining . . . . . *atrum.*

1. **Scaphidium marginatum,** sp. n. (Tab. IV. fig. 1.)

Ovatum, sat depressum, nitidissimum, punctis magnis haud profundis remote impressum, rubrum, maculis duabus suffusis in pronoto elytrorumque disco nigris; capite modico, rufo; oculis magnis, haud prominentibus; pronoto magno, rufo, macula duplici nigra suffusa ante medium notato, ad basin latissimo, remote, haud profunde, punctato, interstitiis glabris, nitidis, punctorum profundorum ordine sinuato, supra angulum utrumque basalem exorto, atque ad scutellum extenso prope basin impresso, lateribus leviter marginatis et leviter rotundatis, ante basin parum contractis, margine basali sinuata, scutellum versus valde producta, angulis sat acutis; elytris quam caput atque pronotum parum latioribus, haud longioribus, ante media latissimis, disco nigrescentibus, lateribus late rufis, punctorum profundorum ordine transverso ab humeris ad suturam extenso utrinque impressis, sat profunde punctatis, interstitiis glabris, nitidis, lateribus leviter marginatis et leviter rotundatis, apicibus modice rotundatis; abdomine rufo, acuminato, modice punctato, segmentorum basibus obscuratis; pedibus longis, gracilibus, femoribus atque tarsis rufis, tibiis nigris; antennis longis, gracilibus, rufis, clavis nigrescentibus. Long. corp. 6 millim., lat. 3 millim.

Body ovate, rather depressed, very shining, remotely marked with large shallow punctures, rufous, with two suffused spots on the thorax and the disc of the elytra black. *Head* moderate, rufous; eyes large, not prominent; antennæ long and slender, rufous, with the club dusky. *Thorax* large, rufous, with a double, suffused, black spot before the middle, widest at the base, remotely but not deeply punctured, the interstices smooth and shining; with a sinuated row of deep punctures on each side arising above the posterior angle and extending to the middle of the base; sides faintly margined and a little rounded, slightly contracted above the base; basal margin sinuated, much produced towards the scutellum, with the angles rather acute. *Scutellum* minute, triangular. *Elytra* rather broader but not longer than the head and thorax, widest before the middle, black on the disc; and broadly rufous at the sides, with a transverse row of deep punctures extending from the shoulders to the suture, rather deeply punctured, with the interstices smooth and shining; sides slightly margined and faintly rounded; extremities moderately rounded. *Abdomen* acuminate, moderately punctured, rufous, with the base of the segments dusky. *Legs* long and slender, the femora and tarsi rufous, the tibiæ black. *Underparts* castaneous, smooth, and shining.

Hab. GUATEMALA, Capetillo, Zapote (*Champion*).

This species is distinguished by its large size and depressed form, and by the colour and sculpture. It was found in plenty at Capetillo by Mr. Champion.

2. **Scaphidium unicolor,** sp. n.

Late ovatum, haud depressum, nitidissimum, leviter et remote punctatum, totum rufum; capite sat brevi; oculis magnis, sat prominentibus; pronoto magno, ad basin latissimo, leviter et remote punctato, interstitiis glabris, nitidissimis, ordine punctorum basali haud profundo, sat remoto, lateribus modice rotundatis, margine basali sinuata, scutellum versus valde producta, angulis acutis; elytris quam caput atque pronotum parum latioribus, vix longioribus, ante media latissimis, indistinctissime punctatis, punctorum ordine humerali profundo, et ad suturam linea impressa conjuncto, stria suturali profunda et distincte punctata, lateribus leviter rotundatis, apicibus latis, minime rotundatis; abdomine rufo, sat obtuso, indistincte punctato; pedibus longis, gracilibus, totis rufis; antennis modicis, rufis, clavis magnis, nigris. Long. corp. 5 millim.; lat. 3 millim.

Body broadly ovate, not depressed, very shining, faintly and remotely punctured, entirely red. *Head* rather short; eyes large and rather prominent; antennæ moderate, red, with the club large and black. *Thorax* large, widest at the base, faintly and remotely punctured, with the interstices smooth and shining, the punctures of the basal row not deep and rather remote from each other; sides moderately rounded; basal margin sinuated, much produced towards the scutellum, with the angles acute. *Scutellum* very small, obtusely triangular. *Elytra* rather broader but scarcely longer than the head and thorax, widest before the middle, very indistinctly punctured; humeral row of punctures deep, and joined to the suture by an impressed line; sutural stria deep and distinctly punctured; sides slightly rounded; extremities broad, and very little rounded. *Abdomen* red, rather obtuse, and indistinctly punctured. *Legs* long and slender, entirely red. *Underparts* entirely red.

Hab. Costa Rica, Irazu (*Rogers*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Differs from the following two species in its larger size, broader and more convex shape, not depressed at the suture, distinct basal row of punctures on the thorax, uniform red colour, and also in sculpture.

3. **Scaphidium mexicanum.** (*S. rubicundum*, Tab. IV. fig. 2, var.)

Scaphidium mexicanum, Cast. Hist. Nat. Ins. Col. ii. p. 19[1]; Reitter, Verh. Ver. Brünn, xviii. p. 37[2].

Scaphidium nigripes, Chevr. in Guérin's Icon. Règne Anim., Ins. p. 62, t. 17. f. 14[3].

Ovatum, latum, convexum, leviter et remote punctatum, ad suturam valde depressum, nitidissimum, totum læte rufum; capite sat parvo; oculis magnis, haud prominentibus; pronoto magno, valde convexo, nitidissimo, leviter et remote punctato, interstitiis glaberrimis, lateribus rotundatis et leviter marginatis, margine basali sinuata, scutellum versus producta, angulis productis, acutis; elytris quam caput atque pronotum vix latioribus aut longioribus, ante media latissimis, remote et levissime punctatis, punctorum ordine humerali denso et profundo, ad suturam non conjuncto, sutura valde depressa, stria profunda et punctata, lateribus rotundatis et leviter marginatis, apicibus latis, modice rotundatis; abdomine acuminato, glabro, nitido, rufo; pedibus longis, aut omnino læte rufis, aut nonnunquam tibiis et femoribus piceis; antennis modicis, rufis, clavis sat brevibus, piceis. Long. corp. 5 millim.; lat. 3 millim.

Body ovate, broad, convex, lightly and remotely punctured, much depressed at the suture, very shining, entirely bright red. *Head* rather small; eyes large, not prominent; antennæ moderate, red, with the club short and piceous. *Thorax* large, very convex, and very shining, lightly and remotely punctured, with the interstices very smooth; basal row of punctures wanting; sides rounded and slightly margined; basal margin sinuated, produced towards the scutellum, with the angles produced and acute. *Scutellum* minute, triangular. *Elytra* scarcely broader or longer than the head and thorax, widest before the middle, remotely and very lightly punctured; humeral row of punctures deep and close, not joined to the suture; suture very much depressed, with the stria deep and punctured; sides rounded and slightly margined; extremities broad and moderately rounded. *Abdomen* acuminate, smooth, and shining. *Legs* long, the tibiæ and sometimes the femora also black or piceous, often entirely bright red.

Hab. Mexico[1 2 3], Cordova (*Sallé*, *Höge*), Tuxtla, Catemaco, Chinantla (*Sallé*),

Jalapa, Chilpancingo (*Höge*); British Honduras, R. Sarstoon, Belize (*Blancaneaux*); Guatemala, Zapote, San Gerónimo, Chacoj (*Champion*).

This variable species was at first mistaken by me for the Colombian *S. rubicundum*, Reitt., and is so named on our Plate. It is distinguished by its very convex and shining surface, deeply depressed at the suture, no basal row of punctures on the thorax, deep and abbreviated humeral row on the elytra, and bright red colour. The legs vary in colour, the tibiæ and sometimes the femora also being often black. The different forms were collected together at Jalapa and Cordova; and with the long series of specimens before me I am unable to distinguish more than one species. The authors cited above give the femora and tibiæ as black, and the tarsi red. An example from Belize with entirely red legs is figured.

4. **Scaphidium geniculatum.**

Scaphidium geniculatum, Oberthür, Col. Nov. i. p. 8 (1883) [1].

Ovatum, leviter depressum, nitidissimum, remote et indistincte punctatum, superficie alutacea, totum flavescens; capite modico, modice punctato; oculis permagnis, sat prominentibus; pronoto magno, ad basin latissimo, indistincte et remote punctato, punctorum ordine basali nullo, lateribus leviter marginatis et leviter rotundatis, margine basali sinuata, scutellum versus producta, angulis acutis; elytris quam caput atque pronotum haud longioribus, parum latioribus, ante media latissimis, sat confertim sed indistincte punctatis, punctorum ordine humerali profundo et denso, ad suturam linea impressa conjuncto, stria suturali profunda et distincte punctata, lateribus leviter marginatis, apicibus modice rotundatis; abdomine acuminato, flavescente; pedibus elongatis, gracilibus, flavescentibus, femorum apicibus atque tibiis totis nigris; antennis modicis, gracilibus, obscure flavis, clavis sat magnis, nigris. Long. corp. 5·50 millim.; lat. 3·50 millim.

Body ovate, slightly depressed, very shining, remotely and indistinctly punctured, with the whole surface alutaceous, entirely flavescent. *Head* moderate, moderately punctured; eyes very large and rather prominent; antennæ moderate, dusky yellow, with the club large and black. *Thorax* large, widest at the base, indistinctly and remotely punctured; basal row of punctures wanting; sides slightly margined and a little rounded; basal margin sinuated, produced towards the scutellum, with the angles acute. *Scutellum* very small, subtriangular. *Elytra* rather broader but not longer than the head and thorax, widest before the middle, rather closely but indistinctly punctured; humeral row of punctures deep and close, joined to the suture by an impressed line; sutural stria deep and distinctly punctured; sides slightly margined; extremities moderately rounded. *Abdomen* acuminate, flavescent. *Legs* very long and slender, flavescent, with the apex of the femora and whole of the tibiæ black. *Underparts* entirely yellow.

Hab. Nicaragua, Chontales (*Janson*); Panama, Matachin (*Thième* [1]).

Differs from *S. mexicanum* and *S. unicolor* in its large size, absence of the basal row of punctures from the thorax, very long legs with black tibiæ, yellow colour, and alutaceous sculpture.

5. **Scaphidium variabile,** sp. n. (Tab. IV. figg. 3, ♂; 4, ♀, var.)

Breve, subovatum, convexum, nitidissimum, modice et remote punctatum, flavescens vel rufum, maculis magnis rotundatis nigris in pronoto, atque fasciis vel maculis transversis nigris in elytris notatum; capite magno, rufescente; oculis magnis, haud prominentibus; pronoto magno, ad basin latissimo, modice et remote punctato, interstitiis glabris, nitidis, flavo vel rufescente, maculis tribus, magnis, rotundatis, nigris, prope marginem anteriorem, quatuor ordine transverso, curvato, in disco, atque duabus prope basin notato, punctorum ordine basali profunde impresso, margine basali sinuata, scutellum versus valde producta, angulis

acutis, lateribus leviter marginatis et leviter rotundatis; elytris subovatis, quam caput atque pronotum longioribus et parum latioribus, ante media latissimis, indistincte sed sat confertim punctatis, punctorum ordine humerali profundo, flavis, humeris, fascia lata transversa ad media, atque macula magna prope apicem, nigris, hisce omnibus inconstantibus, lateribus marginatis et leviter rotundatis, apicibus vix rotundatis, stria suturali profunda; abdomine acuminato, glabro, nitido, flavo, segmento apicali ad basin nigro; pedibus longis, gracilibus, plerumque flavis, tibiis sæpe obscuratis; antennis longis, gracilibus, rufis, clavis obscurioribus. Long. corp. 4·50–5 millim.; lat. 2·25–2·50 millim.

Body short, subovate, convex, and very shining, moderately and remotely punctured, yellow or rufescent, with large brown-black spots on the thorax and transverse fasciæ or large black spots on the elytra. *Head* large, rufescent; eyes large, not prominent; antennæ long and slender, red, with the club dusky. *Thorax* large, widest at the base, moderately and remotely punctured, with the interstices smooth and shining; yellow or rufescent, with three large round black spots near the anterior margin, four in a transverse curved row across the disc, and two near the base; basal row of punctures deep; basal margin sinuated, much produced towards the scutellum, with the angles acute. *Scutellum* very small, triangular. *Elytra* subovate, longer and rather broader than the head and thorax, widest before the middle, indistinctly but rather closely punctured; humeral row of punctures deep; yellow, with the shoulders, a broad transverse fascia near the middle, and a large spot near the apex, black, all the markings varying very much in different individuals; sutural stria deep; sides margined and faintly rounded; extremities scarcely rounded. *Abdomen* acuminate, smooth and shining; yellow, with the base of the apical segment black. *Legs* long and slender, generally yellow, the tibiæ often dusky. *Underparts* yellow.

Hab. Mexico, Santecomapan (*Sallé*), Jalapa (*Höge*); Guatemala, Las Mercedes, Cerro Zunil, San Gerónimo (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Differs from the preceding species in its smaller size, shorter and more quadrate form, and in the beautiful and variable markings of the thorax and elytra.

Found in abundance by Herr Höge at Jalapa, more sparingly in the other localities.

6. **Scaphidium lineaticolle,** sp. n. (Tab. IV. fig. 5.)

Ovatum, sat depressum, glabrum, nitidum, vix punctatum, flavum, lineis quatuor, abbreviatis, nigris, in disco pronoti, atque maculis duabus humeralibus et macula magna ovali in disco utriusque elytri nigris notatum; capite modico, flavo; oculis modicis, haud prominentibus; pronoto longo, ad basin latissimo, pone medium leviter contracto, indistincte punctato, interstitiis alutaceis, punctorum ordine basali nullo, flavo, linea brevi nigra ad mediam marginem anteriorem, alia utrinque in disco, alia ad mediam marginem basalem, atque alia, ante mediam marginis utriusque lateralis notato, lateribus marginatis, levissime rotundatis, pone media leviter contractis, margine basali profunde sinuata, scutellum versus producta, angulis acutis, productis; elytris subquadratis, quam caput atque pronotum parum latioribus, vix longioribus, prope humeros latissimis, punctis minutis striatim dispositis impressis, interstitiis alutaceis, punctorum ordine humerali fere obsoleto, flavis, maculis duabus parvis humeralibus nigris, atque macula magna ovali nigra in disco utriusque notatis, lateribus nigro-marginatis et levissime rotundatis, apicibus latis, rotundatis; abdomine conico, flavescente, segmenti apicalis basi obscurata; pedibus modicis, femoribus atque tarsis rufis, tibiis obscuratis; antennis modicis, totis rufis. Long. corp. 4·50 millim.; lat. 2·25 millim.

Body ovate, rather depressed, smooth and shining, scarcely punctured, yellow, with four short black lines on the disc of the thorax, and two humeral and one large black discal spot on each elytron. *Head* moderate, yellow; eyes moderate, not prominent; antennæ moderate, entirely red. *Thorax* long, widest at the base, faintly contracted behind the middle, indistinctly punctured, the interstices alutaceous; basal row of punctures wanting; yellow, with a short black line in the middle of the anterior margin, another on each side on the disc, another in the middle of the basal margin, and one on each lateral margin before the middle; sides margined and very little rounded; basal margin deeply sinuated, produced towards the scutellum, with the angles acute and produced. *Scutellum* small, triangular, black. *Elytra* subquadrate,

rather broader but scarcely longer than the head and thorax, widest near the shoulders, marked with minute punctures placed in striæ, the interstices alutaceous; humeral row of punctures obsolete; yellow, with two small black spots on the shoulder and one large oval black spot on the disc of each elytron; sides margined and very slightly rounded, the margin black; extremities broad and rounded. *Abdomen* conic, flavescent, with the base of the apical segment dusky. *Legs* moderate, the femora and tarsi rufous, the tibiæ dusky. *Underparts* entirely red.

Hab. Mexico, Cordova (*Sallé*).

S. lineaticolle differs from *S. variabile* in the absence of the basal row of punctures from the thorax, and in the shape and disposition of the markings on its disc—these markings being in the form of lines and not round spots; two are placed on the median line, a position never occupied on the thorax in *S. variabile*. The present insect may, however, be an extreme variety of that species.

7. **Scaphidium transversale,** sp. n. (Tab. IV. fig. 6.)

Latum, ovatum, sat depressum, nitidulum, pronoto rufo-piceo; elytris rufis, macula magna, transversa, prope medium in utroque atque apicibus late nigris; capite sat parvo, rufescente, oculis haud prominentibus; pronoto magno et lato, ad basin latissimo, rufo-piceo, alutaceo, punctis indistinctis, remotis, impresso, punctorum linea basali obsoleta, margine basali scutellum versus producta, angulis acutis; elytris latis, depressis, quam caput atque pronotum vix longioribus, parum latioribus, prope humeros latissimis, indistincte punctatis, interstitiis glabris, rufis, macula magna, transversa, reniformi prope medium utriusque atque apicibus late nigris, stria suturali profunda et profunde punctata, punctorum ordine humerali valde conspicua, lateribus leviter marginatis, apicibus latis, rotundatis, et profundius punctatis; abdomine longius exserto, rufo-piceo; pedibus longis, nigrescentibus; antennis sat brevibus, rufescentibus, clavis nigris. Long. corp. 5 millim.; lat. 3 millim.

Body broad, ovate, rather depressed, moderately shining; thorax rufo-piceous; elytra red, with a large, transverse, reniform, black spot on each near the middle, and the extremities broadly black. *Head* rather small, rufescent; eyes not prominent; antennæ rather short, rufous, with the club black. *Thorax* large and broad, widest at the base, rufo-piceous, alutaceous, marked with remote indistinct punctures; basal row of punctures obsolete; basal margin produced towards the scutellum, with the angles acute. *Scutellum* very small, triangular, black. *Elytra* broad, depressed, rather broader but scarcely longer than the head and thorax, widest near the shoulders, indistinctly punctured, with the interstices smooth; red, with a large, transverse, reniform, black spot on each near the middle, and their extremities broadly black; sutural stria deep and deeply punctured; humeral row of punctures very distinct; sides faintly margined; extremities broad, rounded, and more deeply punctured. *Abdomen* much exposed, rufo-piceous. *Legs* long, nigro-piceous. *Underparts* black.

Hab. Panama, Caldera in Chiriqui (*Champion*).

Differs from *S. variabile* in its larger size, much broader form, shorter antennæ, and nigrescent legs, and also in colour and sculpture.

This species in some respects agrees with Reitter's description of *S. fascipenne*, from Brazil (Verh. Ver. Brünn, xviii. p. 38), but differs from it in the absence of the basal row of punctures from the thorax. The single specimen found by Mr. Champion appears to be obscurely marked with spots on the thorax.

8. **Scaphidium atrum,** sp. n. (Tab. IV. figg. 7, ♂; 8, ♀.)

Ovatum, sat depressum, glabrum, nitidissimum, indistincte sed sat confertim punctatum, totum aterrimum; capite modico; oculis magnis, prominentibus; pronoto sat longo, ad basin latissimo, confertim sed indistincte

punctato, interstitiis glabris, nitidis, punctorum ordine basali profunde impresso, lateribus marginatis, antice rotundatis, postice parum contractis, margine basali sinuata, scutellum versus producta, angulis sat productis, acutissimis; elytris modicis, quam caput atque pronotum parum longioribus, vix latioribus, prope humeros latissimis, confertim sed indistincte punctatis, interstitiis glabris, nitidis, punctorum ordine humerali profunde impresso, sutura apicibusque valde depressis, stria suturali profunda, lateribus late marginatis, leviter rotundatis, apicibus latis, leviter rotundatis; abdomine obtuso, indistincte punctato; pedibus sat robustis, elongatis, nigris; antennis sat parvis, rufescentibus, clavis obscurioribus, valde compressis. Long. corp. 5–5·50 millim.; lat. 2·50–3 millim.

Body ovate, rather depressed, smooth and shining, indistinctly but rather closely punctured, entirely black. *Head* moderate; eyes large and prominent; antennæ rather small, rufescent, the club compressed and dusky. *Thorax* rather long, widest at the base; closely but indistinctly punctured, with the interstices smooth and shining; basal row of punctures very deep; sides margined, rounded in front, and slightly contracted near the base; basal margin sinuated, produced towards the scutellum, with the angles produced and very acute. *Scutellum* minute, triangular. *Elytra* moderate, rather longer but scarcely broader than the head and thorax, widest near the shoulders; closely but indistinctly punctured, with the interstices smooth and shining; humeral row of punctures very deep; suture and extremities much depressed; sutural stria deep; sides broadly margined and slightly rounded; extremities broad and faintly rounded. *Abdomen* obtuse, indistinctly punctured. *Legs* long, rather robust, black. *Underparts* entirely black.

Hab. Mexico, Cinco Señores, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Zapote, Purula, Teleman (*Champion*).

Differs from other Central-American species in its large size and deep black colour, and also in sculpture. Numerous examples.

CYPARIUM.

Cyparium, Erichson, Naturg. Ins. Deutschl. iii. p. 3 nota (1846).

Antennæ 11-jointed, the basal joint not much incrassated, 4 rather shorter than the others, 7–11 forming a moderately incrassated, rather close club. *Maxillary palpi* 4-jointed—1 very small, 2 and 3 nearly equal, 4 much larger than the preceding, conical. *Labial palpi* 3-jointed—1 and 2 very short, transverse, with an erect seta near the apex of the latter, 3 much larger than either of the preceding, incurved and conical. *Labrum* large, with the sides very much dilated, circularly rounded, and broadly transparent. *Mandibles* very robust, bifid at the apex, and furnished with a small ciliated appendage below the apex. *Maxillæ* robust, bilobed, with the inner lobe broad, vertically flat, and armed at the apex with five strong, very sharp, and much incurved teeth. *Mentum* moderate, subquadrate, widest anteriorly. *Labium* moderate, subquadrate, slightly extending beyond the anterior margin of the mentum. *Lingua* very large, much dilated at the sides, and faintly emarginate in front; strengthened with a very strong medial costa on the inner side. *Prosternum* very small; *episterna* indistinct; *epimera* rather large, subtriangular; coxal cavities open in front and behind, extending into the mesosternum. *Mesosternum* moderate, carinated between the anterior coxæ; *episterna* moderate, concealed by the thorax; *epimera* small, slightly visible in front. *Metasternum* rather large, excavated between the posterior coxæ; *episterna* long and narrow; *epimera* slightly produced in front beyond the episterna. *Venter* composed of six segments, with the basal segment much larger than the others. *Legs* moderate; tibiæ faintly curved and spinose; tarsi 5-jointed, with the basal joint the longest. *Coxæ*: *anterior* prominent and contingent; *intermediate* rather distant; *posterior* moderately distant.

This genus contains nine described species; three others are now added from Central America.

Epitome of the Species.

L. c. 3·75 mm. Above pale, the thorax and the disc of the elytra testaceous; legs pale; the club of the antennæ black . . . . . *palliatum.*

L. c. 5 mm. Entirely black, short and broad; elytra with six striæ on each; legs nigro-piceous; antennæ rufous, the club black, with the apical joint red . . *sallæi.*

L. c. 3·25 mm. Short and broad, black, with the shoulders, or apex of the elytra, or both, flavescent, sometimes entirely black; legs and antennæ yellow, the club of the latter black . . . . . *terminale.*

L. c. 3 mm. Yellow, with black markings on the thorax and elytra; legs yellow; antennæ yellow, with the club black . . . . . *championi.*

1. Cyparium palliatum.

Cyparium palliatum, Erichs. Naturg. Ins. Deutschl. iii. p. 4 nota [1].

"Supra pallidum, thoracis coleopterorumque disco testaceo, infra testaceum, pectore abdomineque pallido-marginatis; pedibus pallidis; antennarum clava nigra. Long. $1\frac{2}{3}$ lin."

Hab. Mexico [1].

Erichson founded the genus *Cyparium* upon this species; his altogether too brief description would appear to have been made from an immature specimen.

2. Cyparium sallæi, sp. n. (Tab. IV. fig. 10.)

Breve, latum, modice convexum, nitidissimum, aterrimum; capite parvo, nitido, confertim punctato; oculis magnis, valde prominentibus; pronoto magno, ad basin latissimo, valde convexo, punctis minutis, remotis, distincte impresso, interstitiis glabris, nitidissimis, lateribus rotundatis et marginatis, punctorum ordine basali distincto, margine basali scutellum versus producta, angulis rectis; elytris quadratis, quam caput atque pronotum vix longioribus, parum latioribus, ante media latissimis, sat depressis, striis sex profunde et confertim punctatis in utroque impressis, interstitiis minute et remote punctatis, stria suturali valde profunda, et fere simplici lateribus irregulariter punctatis, late marginatis, apicibus perlatis, leviter rotundatis; abdomine modice exserto, nigro, minute punctato; pedibus modicis, nigro-piceis, tarsis rufis; antennis rubris, clavis nigris, articulo apicali rufo. Long. corp. 5 millim.; lat. 3 millim.

Body short and broad, moderately convex, very shining, deep black. *Head* small, shining, and closely punctured; eyes large and very prominent; antennæ moderate, rufous, the club black, with the apical joint red. *Thorax* large, widest at the base, very convex, distinctly marked with minute and remote punctures, the interstices smooth and very shining; sides rounded and margined; basal row of punctures distinct; basal margin produced towards the scutellum, with the angles rectangular. *Scutellum* moderate, rufescent. *Elytra* quadrate, scarcely longer but rather broader than the head and thorax, widest before the middle, rather depressed, with six deeply and closely punctured striæ on each, the interstices minutely and remotely punctured; sutural stria simple and deep; sides irregularly punctured and broadly margined; extremities very broad and slightly rounded. *Abdomen* black, moderately exserted and minutely punctured. *Legs* moderate, nigro-piceous, with the tarsi red. *Underparts* black.

Hab. Mexico, Cordova (*Sallé*).

Differs from the black variety of *C. terminale* in its much larger size and deeper sculpture.

3. **Cyparium terminale,** sp. n. (Tab. IV. fig. 9.)

Breve, latum, convexum, glabrum, nitidum, elytris striatim punctatis, totum nigrum, vel nigrum humeris atque fascia transversa prope apices elytrorum flavis; capite nigro, brevi, lato; oculis modicis, sat prominentibus; pronoto nigro, angulis anterioribus sæpe plus minusve flavis, sat parvo, transverso, valde convexo, minute et remotissime punctato, interstitiis glabris, nitidis, punctorum ordine basali nullo, lateribus marginatis et valde rotundatis, margine basali leviter sinuata et scutellum versus leviter producta, angulis rectis; elytris nigris, macula humerali atque fascia transversa prope apices flavis sæpe notatis, subquadratis, quam caput atque pronotum parum latioribus, sesqui-longioribus, prope humeros latissimis, punctorum ordine humerali nullo, striis remotis, postice convergentibus, distincte punctatis, stria suturali profunde punctata, lateribus marginatis et leviter rotundatis, apicibus latis, fere rectis; abdomine nigro, brevi et acuminato; pedibus sat brevibus, plerumque flavis, femoribus obscuratis; antennis brevibus, flavis, clavis brevibus, nigris. Long. corp. 3·25 millim.; lat. 2 millim.

Body short, broad, convex, smooth and shining, with the elytra punctured in striæ, either entirely black, or black with the shoulders of the elytra, and a transverse fascia near their apex, yellow. *Head* black, short and broad; eyes moderate, rather prominent; antennæ short, yellow, with the club black. *Thorax* black, with the anterior angles sometimes flavescent, rather small, transverse, very convex, minutely and very remotely punctured, with the interstices smooth and shining; basal row of punctures obsolete; sides margined and much rounded; basal margin faintly sinuated, and slightly produced towards the scutellum, with the angles rectangular. *Scutellum* small, triangular. *Elytra* black, with the shoulders and a transverse fascia near the apex yellow, or entirely black; subquadrate, rather broader and one half longer than the head and thorax, widest near the shoulders, without the humeral row of punctures, distinctly punctured in remote striæ converging towards the apex; sutural stria deeply punctured; sides margined and slightly rounded; extremities broad and nearly straight. *Abdomen* black, short, and acuminated. *Legs* rather short; generally yellow, with the femora dusky.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, Zapote, Capetillo, San Juan in Vera Paz (*Champion*); Panama, Bugaba (*Champion*).

This species is distinguished by its short, broad form, the striate punctuation of the elytra, and the short legs and antennæ. It is variable in colour and sometimes has the sides of the thorax, as well as the shoulders and a transverse fascia near the apex of the elytra, yellow; rarely it is entirely black.

4. **Cyparium championi,** sp. n. (Tab. IV. fig. 11.)

Rotunde ovatum, convexum, glaberrimum, nitidissimum, flavum, maculis magnis, nigris, ordinibus transversis ornatum; capite lato, flavo, postice obscurato; oculis magnis, prominentibus; pronoto sat brevi, ad basin latissimo, impunctato, nitidissimo, alutaceo, punctorum ordine basali nullo, flavo, macula magna nigra reniformi in disco utrinque ornato, lateribus vix rotundatis, marginatis, margine basali scutellum versus valde producta, angulis fere rectis; elytris subquadratis, quam caput atque pronotum vix latioribus, sesqui-longioribus, prope humeros latissimis, punctis modicis striis remotis distincte dispositis impressis, interstitiis alutaceis, apices versus magis confertim punctatis, punctorum ordine humerali nullo, flavis macula parva ad angulum humeralem, alia ante mediam suturam, macula magna transversa reniformi ad basin, alia ad medium, atque alia ad apicem elytri utriusque ornatis, stria suturali profunde punctata, lateribus marginatis, leviter rotundatis, apicibus latis, modice rotundatis; abdomine longo, flavo, segmentorum basibus anguste nigris; pedibus sat brevibus, flavis; antennis brevibus, flavis, clavis nigris. Long. corp. 3 millim.; lat. 3 millim.

Body roundly ovate, convex, very smooth and shining, yellow, ornamented with large black spots in transverse rows. *Head* broad, yellow, dusky at the base; eyes large and prominent; antennæ short, yellow, with the club black. *Thorax* rather short, widest at the base, impunctate, alutaceous and very shining, with no basal row of punctures; yellow, with a large reniform black spot on each side of the disc; sides mar-

gined and scarcely rounded; basal margin much produced towards the scutellum, with the angles nearly rectangular. *Scutellum* rather long, triangular. *Elytra* subquadrate, scarcely broader but one half longer than the head and thorax, widest near the shoulders, marked with moderate-sized punctures in remote striæ, the interstices alutaceous, more closely punctured towards the apex, with no humeral row of punctures; yellow, ornamented on each elytron with a small black spot at the humeral angle, another before the middle on the suture, a large transverse reniform spot on the base, another in the middle, and another at the apex; sutural stria deeply punctured; sides margined and faintly rounded; extremities broad and moderately rounded. *Abdomen* long, yellow, with the bases of the segments narrowly black. *Legs* rather short, yellow. *Underparts* yellow.

Hab. PANAMA, Bugaba (*Champion*).

One example.

Differs from the preceding species in its short, rounded form, smaller size, and ornamental colour.

BÆOCERA.

Bæocera, Erichson, Naturg. Ins. Deutschl. iii. p. 4 nota (1846).

Antennæ 11-jointed—1 long and rather robust, slightly recurved; 2 like the preceding, but straight; 3 short and slender, incrassate towards the apex; 4–8 each longer than the third, gradually incrassated; 9–11 incrassated equally on all sides, forming an elongate moniliform club. *Maxillary palpi* slender, 4-jointed—1 very small; 2 and 3 rather long, nearly equal; 4 long and very acute. *Labial palpi* 3-jointed—1 long, cylindric; 2 smaller and shorter than the preceding; 3 small, acicular. *Labrum* short and very broad, the sides rounded and broadly transparent, widely emarginate in front and minutely denticulate. *Mandibles* robust, much hooked at the apex, and furnished above the middle with a rather large, dentate appendage. *Maxillæ* robust, bilobed; outer lobe slightly dilated anteriorly, and furnished at the apex with strong, incurved setæ; inner lobe large, robust, armed at the apex with long, incurved, setiform teeth. *Mentum* large, quadrate. *Labium* short and broad, slightly extending beyond the mentum. *Lingua* very large, transverse, much dilated and rounded at the sides, faintly emarginate in front, strengthened with a strong medial costa. *Prosternum* very small, carinated; *episterna* indistinct; *epimera* minute; coxal cavities extending into the mesosternum. *Mesosternum* large; *episterna* very small, antehumeral; *epimera* long and very narrow, not extending to the coxal cavities. *Metasternum* moderate; *episterna* very broad, not extending to the coxæ; *epimera* very large, much inflexed beyond the episterna. There are single rows of deep punctures on the anterior margin and on the sides of the *metasternum*, and on the basal margin of the first ventral segment. *Venter* composed of six segments—1, 5, and 6 long, 2, 3, and 4 short. *Legs* moderate; tarsi 5-jointed—1 very long, 2, 3, and 4 shorter, nearly equal. *Coxæ*: *anterior* large and prominent, separated by the carina; *intermediate* rather widely distant; *posterior* less distant than the intermediate.

This genus contains about a dozen described species, inhabiting North, Central, and South America, Europe, and New Zealand; five species are now recorded from Mexico or Central America.

I am unable to identify either of the species before me with those described by Reitter.

Epitome of the Species.

L. c. 2 mm. Oval, very shining, almost smooth, castaneous; legs and antennæ rather short, rufescent . . . . . *major.*

L. c. 1·75 mm. Oval, rather broad, very shining, deeply punctured, nigro-piceous; legs and antennæ rather short, rufescent . . . . . *erichsoni.*

L. c. 1·50 mm. Oval, rather broad, very shining; thorax smooth; elytra deeply punctured; legs and antennæ rufous . . . . . *punctipennis.*

L. c. 1 mm. Broad, narrowed anteriorly, black, shining; antennæ (the club excepted) and legs ferruginous . . . . . *mexicana.*

L. c. 1 mm. Oblong, convex, shining, black with a metallic bluish tint; antennæ (the club excepted), legs, and the last segments of the abdomen pitchy-testaceous . . . . . *gyrinoides.*

1. **Bæocera major,** sp. n.

Ovalis, valde convexa, nitidissima, fere glabra, castanea, pronoto obscuriore; capite parvo; oculis modicis, haud prominentibus; pronoto magno, antice rotundato, ad basin latissimo, impunctato, nitidissimo, lateribus valde rotundatis, leviter marginatis, margine basali haud sinuata, scutellum versus producta, angulis productis, acutis; elytris longis, quam caput atque pronotum duplo longioribus, vix latioribus, ad humeros latissimis, superficie sat inæquali, indistinctissime punctata, lateribus leviter marginatis, ovaliter rotundatis, apice integro, latissimo, rotundato; abdomine piceo, vix exserto; pedibus atque antennis sat brevibus, rufescentibus. Long. corp. 2 millim.; lat. 1·10 millim.

Body oval, very convex, and very shining, nearly smooth, castaneous, with the thorax darker. *Head* small; eyes moderate, not prominent; antennæ rather short, rufescent. *Thorax* large, rounded in front, widest at the base, impunctate, very shining; sides much rounded, and slightly margined; basal margin not sinuated, produced towards the scutellum, with the angles produced and acute. *Scutellum* small, partly exposed. *Elytra* long, twice longer but scarcely broader than the head and thorax, widest at the shoulders, with the surface rather uneven and very indistinctly punctured; sides ovally rounded and slightly margined; apex entire, very broad and rounded. *Abdomen* scarcely exposed, piceous. *Legs* rather short, rufescent. *Underparts* castaneous, with a row of deep punctures on the mesosternum, metasternum, and first ventral segment immediately below the coxal cavities.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Zapote (*Champion*).

Differs from the other Central-American species in its larger size, the thorax larger and much rounded in front, and also in general sculpture.

B. major is probably an ally of *B. mexicana*, Reitt., but is twice the size of that insect.

2. **Bæocera erichsoni,** sp. n.

Ovalis, sat lata, valde convexa, nitidissima, profunde punctata, nigro-picea; capite magno; oculis modicis, vix prominentibus; pronoto modico, ad basin latissimo, profunde, haud confertim, punctato, interstitiis glabris, nitidis, lateribus marginatis et rotundatis, margine basali leviter rotundata, scutellum versus producta, angulis sat acutis; elytris modicis, quam caput atque pronotum parum latioribus, vix sesqui-longioribus, prope media latissimis, profunde haud confertim punctatis, interstitiis glabris, nitidis, lateribus marginatis, ovaliter rotundatis, epipleuris rufescentibus, apicibus latis, fere rectis, dilutioribus; abdomine parum exserto, apice læte rufo; pedibus sat brevibus, rufescentibus; antennis brevibus, rufescentibus, clavis obscurioribus. Long. corp. 1·75 millim.; lat. 0·90 millim.

Body oval, rather broad, very convex and very shining, deeply punctured, nigro-piceous. *Head* large; eyes moderate, scarcely prominent; antennæ short, rufescent, with the club dusky. *Thorax* moderate, widest at the base, deeply but not closely punctured, the interstices smooth and shining; sides margined and rounded; basal margin faintly rounded, produced towards the scutellum, with the angles rather acute. *Scutellum* small, triangular, partly exposed. *Elytra* moderate, rather broader but scarcely one half longer than the head and thorax, widest near the middle; deeply, not closely, punctured, with the interstices smooth and shining; sides margined and ovally rounded; epipleura rufescent; extremities broad, nearly

straight, pale. *Abdomen* not much exserted, piceous, with the apex bright rufous. *Legs* rather short, rufescent. *Underparts* piceous, with the apex of the venter bright rufous.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*).

The deeply punctured upper surface separates this species from the North-American *B. apicalis*, Lec.

3. **Bæocera punctipennis,** sp. n.

Ovalis, sat lata, valde convexa, nitidissima, pronoto glabro, elytris profunde punctatis, castanea; capite magno, lato; oculis magnis, prominentibus; pronoto modico, ad basin latissimo, glabro, nitido, punctis exiguis remote et indistincte impresso, lateribus marginatis et rotundatis, margine basali haud sinuata, scutellum versus producta, angulis acutis; elytris quam caput atque pronotum sesqui-longioribus, parum latioribus, prope media latissimis, remote et profundissime punctatis, interstitiis glabris, nitidis, lateribus marginatis et ovaliter rotundatis, apicibus latis, rotundatis; abdomine minime exserto, rufo-castaneo; pedibus modicis, rufis; antennis robustis, rufis. Long. corp. 1·50 millim.; lat. 0·90 millim.

Body oval, rather broad, very convex and very shining, with the thorax smooth and the elytra deeply punctured, castaneous. *Head* large and broad; eyes large and prominent; antennæ robust, rufous. *Thorax* moderate, widest at the base, smooth and shining, remotely and very indistinctly marked with very minute punctures; sides margined and rounded; basal margin not sinuated, produced towards the scutellum, with the angles acute. *Scutellum* small, triangular, partly exposed. *Elytra* one half longer and rather broader than the head and thorax, widest near the middle; remotely and very deeply punctured, with the interstices smooth and shining; sides margined and ovally rounded; extremities broad and rounded. *Abdomen* very little exserted, rufo-castaneous. *Legs* moderate, rufous. *Underparts* entirely rufo-castaneous.

Hab. NICARAGUA, Chontales (*Janson*).

Differs from *B. erichsoni* in its smooth and almost impunctate thorax and longer antennæ; and from *B. major* in its smaller size, punctured elytra, and longer antennæ.

4. **Bæocera mexicana.**

Bæocera mexicana, Reitter, Verh. Ver. Brünn, xviii. p. 45 nota [1].

"Lata, antrorsum attenuata, nitida, glabra, nigra, antennis, clava excepta, pedibusque dilute ferrugineis; elytris stria suturali, prope basin longe arcuata, subtilissima. Long. 1 millim."

Hab. MEXICO (*Bilimek* [1]).

5. **Bæocera gyrinoides.**

Bæocera gyrinoides, Reitter, Verh. Ver. Brünn, xviii. p. 46 nota [1].

"Oblonga, convexa, nitidissima, glabra, nigra, chalybæo-nitens, antennis, clava fusca excepta, pedibus, abdominis segmentis ultimis piceo-testaceis, pygidio elytrisque apice parum dilutioribus; his stria suturali, prope basin longe arcuata, subtilissima. Long. 1 millim."

Hab. MEXICO, Teapa [1].

SCAPHISOMA.

Scaphisoma, Leach, Edinb. Encycl. ix. p. 89 (1812).

Antennæ 11-jointed—1 and 2 moderately large; 3 very minute; 4, 5, 6 very long and slender; 7–11 more or less incrassated on the inner side, forming an elongate club. *Maxillary palpi* long and slender, 4-jointed—

1 very small; 2 and 3 long, subcylindric, nearly equal; 4 much the longest, acuminate. *Labial palpi* rather large, distinctly 4-jointed—1, 2, 3 transverse, gradually decreasing in size; joint 4 the longest, subcylindric, much incurved, with the apex obtuse; joints 1 and 2 each with an erect seta on the inner side of the apex. *Labrum* large, rounded, and narrowly transparent at the sides, emarginate in front, and furnished on the disc with strong setæ. *Mandibles* robust, not bifid at the apex, furnished with a ciliated appendage above the middle. *Maxillæ* moderate, bilobed; outer lobe large, much dilated, and shortly pectinated at the apex; inner lobe small and short, pectinated at the apex. *Mentum* elongate-oblong, concave at the sides. *Labium* rather small, suboblong, widest at the apex. *Lingua* very large, much expanded laterally, concave in front, and strengthened with a strong medial costa. *Prosternum* small; *episterna* rather long; *epimera* very small, linear; coxal cavities extending into the mesosternum. *Mesosternum* moderate; *episterna* small, antehumeral; *epimera* small, linear, widely distant from the coxal cavities; mesosternum elevated and produced into a lanciform point between the anterior coxæ. *Metasternum* moderate, widely distant from the sides of the body; *episterna* very broad, not extending to the coxæ; *epimera* very large, broadly inflected beyond the episterna. *Venter* composed of six segments—1, 5, 6 very long, 3, 4, 5 short. *Legs* generally long and slender; tarsi 5-jointed—1 very long, 2, 3, 4 shorter, subequal, the anterior pair sometimes dilated. *Coxæ*: *anterior* prominent and contingent; *intermediate* rather widely distant; *posterior* rather widely distant.

In one of my dissections the labium has been separated from the mentum. This preparation clearly exhibits the attachment of the labium to the base of the mentum on its inner side, and also the attachment of the lingua to the inner side of the labium.

Forty-six species of this widely distributed genus have been described; two only of these are from Mexico or Central America, whence I now add eleven others.

Epitome of the Species.

Elytra variegated.

L. c. 2·50 mm. Ovate, rather deeply punctured; red, with the elytra more or less broadly fasciated with black; legs and antennæ long, red . . . . . *balteatum.*

L. c. 2·25 mm. Ovate, broad, closely punctured; elytra with a suffused crimson spot on the disc; abdomen bright yellow; legs and antennæ yellow . . . *lætum.*

Elytra pale.

L. c. 1·75 mm. Ovate, moderately punctured; flavescent, with a lunate mark on each elytron; legs and antennæ rufescent . . . . . *lunatum.*

L. c. 1·25 mm. Broadly ovate, moderately punctured; flavescent, with the disc of the elytra dusky; legs and antennæ very long, yellow . . . . . *nebulosum.*

L. c. 1·75 mm. Ovate, rather broad, testaceous, elytra strongly punctured; legs and antennæ testaceous . . . . . *luteipes.*

Elytra black or castaneous.

L. c. 3·50 mm. Elongate ovate, deep black, closely punctured; thorax much rounded in front; legs black; antennæ piceous . . . . . *thoracicum.*

L. c. 2·75 mm. Broadly ovate, pitchy-castaneous, minutely punctured; legs and antennæ bright rufous . . . . . *guatemalense.*

L. c. 2·25 mm. Broadly ovate, deep black, closely punctured; legs and antennæ long, rufescent . . . . . *bilimeki.*

L. c. 2·25 mm. Oval, deep black, smooth; legs short, rufo-piceous; antennæ long, rufescent . . . . . *neotropicale.*

L. c. 1·75 mm. Broadly ovate, deep black; thorax deeply punctured; legs and antennæ rufescent . . . . . *puncticolle.*

L. c. 1·50 mm. Short and broad, black, minutely and remotely punctured; legs and antennæ rufescent . . . . . *breve.*

L. c. 1·40 mm. Short and broad, deeply punctured; black, with the elytra castaneous; legs and antennæ bright red . . . . . *punctatissimum.*

L. c. 1·50 mm. Oval, convex, deep black, very smooth and very shining; legs and antennæ rufescent . . . . . *longicolle.*

1. **Scaphisoma balteatum,** sp. n. (Tab. IV. fig. 12.)

Ovatum, valde convexum, nitidissimum, sat profunde punctatum, vel rufum fascia lata nigra in elytris notatum, vel nigrum pronoti humeris atque apicibus elytrorum rufis; capite modico, rufo; oculis magnis, haud prominentibus; pronoto modico, rufo, in disco plus minusve obscurato, ad basin latissimo, modice, non profunde, punctato, interstitiis glabris, nitidis, lateribus leviter marginatis et leviter rotundatis, margine basali scutellum versus producta, angulis sat obtusis; elytris vel rufis fascia lata nigra postice sinuata prope media notatis, vel nigris humeris apicibusque rufis, quam caput atque pronotum parum longioribus, vix latioribus, prope humeros latissimis, sat profunde et confertim punctatis, interstitiis glabris, nitidis, stria suturali profunda, lateribus marginatis, fere rectis, apicibus sat angustatis, modice rotundatis; abdomine rufo, acuminato; pedibus atque antennis longis, gracilimis, rufis. Long. corp. 2·75 millim.; lat. 1·50 millim.

Body ovate, very convex and very shining, rather deeply punctured, either red with a broad black fascia on the elytra, or black with the shoulders and apex of the elytra red. *Head* moderate, red; eyes large, not prominent; antennæ red, long, and very slender. *Thorax* moderate, red, with the disc more or less dusky, widest at the base, moderately, not deeply, punctured, with the interstices smooth and shining; sides slightly margined, and faintly rounded; basal margin produced towards the scutellum, with the angles rather obtuse. *Scutellum* small, covered by the thorax. *Elytra* either red with a broad black fascia, sinuated on the posterior edge, near the middle, or black with the shoulders and apex red; rather longer but scarcely broader than the head and thorax, widest near the shoulders; rather deeply and closely punctured, with the interstices smooth and shining; sutural stria deep; sides margined, nearly straight; extremities rather narrowed, and moderately rounded. *Abdomen* red, acuminated. *Legs* red, long, and slender. *Underparts* rufous, with the pectus dusky.

Hab. Mexico, Jalapa, Cerro de Plumas (*Höge*).

Differs from its allies in its ornamental colour, rather large size, red legs, and long and very slender red antennæ.

Found in plenty by Herr Höge at Jalapa.

2. **Scaphisoma lætum,** sp. n.

Ovatum, sat latum, valde convexum, nitidissimum, confertim punctatum, macula magna læte rufa in elytro utroque ornatum; capite magno, prominente, rufescente; oculis magnis, nigris, haud prominentibus; pronoto magno, antice angustato, ad basin latissimo, rufo, in disco plus minusve obscurato, leviter et confertim punctato, interstitiis glabris, nitidissimis, lateribus marginatis et rotundatis, margine basali haud sinuata, scutellum versus producta, angulis acutis, sat productis; elytris quam caput atque pronotum longioribus et parum latioribus, ante media latissimis, postice attenuatis, nigro-piceis, macula magna læte rufa pone media ornatis, sat confertim et sat profunde punctatis, fere asperatis, interstitiis glabris, nitidis, lateribus marginatis et ovaliter rotundatis, apicibus angustatis, fere rectis; abdomine læte flavo, longo et acuminato; pedibus longis, gracilibus, læte flavis; antennis longis, obscure flavis. Long. corp. 2·50 millim.; lat. 1·50 millim.

Body ovate, rather broad, very convex and very shining, closely punctured, ornamented with a large bright red spot on each elytron, and a bright yellow abdomen. *Head* large and prominent, rufescent; eyes black, large, not prominent; antennæ long, dusky yellow. *Thorax* rather large, narrower than the head in front, widest at the base, red, with the disc more or less dusky; finely and closely punctured, with the interstices smooth and shining; sides margined and rounded; basal margin not sinuated, produced towards the scutellum, with the angles acute and rather produced. *Scutellum* minute, triangular, and elongate. *Elytra* longer and rather broader than the head and thorax, widest before the middle, attenuated posteriorly, nigro-piceous, ornamented with a large bright red spot beyond the middle, rather closely and rather deeply punctured, almost asperated, with the interstices smooth and shining; sides margined and ovally rounded; extremities narrow, and nearly straight. *Abdomen* bright yellow, long, and much acuminated. *Legs* long and slender, bright yellow. *Underparts* rufo-castaneous.

Hab. GUATEMALA, Zapote (*Champion*).

Differs from all other Central-American species in its large head, thorax narrowed in front, bright yellow abdomen, and ornamental colour.

3. **Scaphisoma lunatum,** sp. n. (Tab. IV. fig. 13.)

Ovatum, valde convexum, nitidum, modice punctatum, flavum, macula lunata nigrescente pone medium elytrorum, nonnumquam absente; capite sat magno; oculis magnis, haud prominentibus; pronoto modico, ad basin latissimo, minutissime punctato, interstitiis glabris, nitidis lateribus leviter marginatis et leviter rotundatis, margine basali haud sinuata, angulis acutis; elytris sat longis, quam caput atque pronotum plus quam sesqui-longioribus, vix latioribus, prope humeros latissimis, modice et remote punctatis, interstitiis glabris, nitidis, stria suturali profunda, lateribus marginatis, modice rotundatis, apicibus latis, rotundatis; abdomine rufescente; pedibus atque antennis longis, rufescentibus. Long. corp. 1·75 millim.; lat. 1 millim.

Body ovate, very convex, shining, moderately punctured, yellow, the elytra each with a transverse lunate mark behind the middle, and the base very narrowly, piceous, the dark markings sometimes effaced. *Head* rather large; eyes large, not prominent; antennæ long, rufescent. *Thorax* moderate, widest at the base, very minutely punctured, with the interstices smooth and shining; sides slightly margined and slightly rounded; basal margin not sinuated, with the angles acute. *Scutellum* covered by the thorax. *Elytra* rather long, more than one half longer but scarcely broader than the head and thorax, widest near the shoulders, moderately and remotely punctured, with the interstices smooth and shining; sutural stria deep; sides margined and moderately rounded; extremities broad and rounded. *Abdomen* moderate, rufescent. *Legs* long, rufescent. *Underparts* rufescent, with the pectus castaneous.

Hab. NICARAGUA, Chontales (*Janson*).

This species is distinguished by its pale yellow or testaceous colour, the elytra often with a transverse lunate mark behind the middle, and the base very narrowly, piceous.

A well-marked example is shown on our Plate.

4. **Scaphisoma nebulosum,** sp. n.

Late ovatum, convexum, nitidissimum, modice et distincte punctatum, flavum, elytrorum disco obscurato; capite modico; oculis nigris, magnis, et sat prominentibus; pronoto modico, ad basin latissimo, modice et distincte punctato, interstitiis glabris, nitidis, lateribus modice rotundatis et marginatis, margine basali haud sinuata, scutellum versus producta, angulis acutis; elytris rufo-testaceis, disco plus minusve obscurato, quam caput atque pronotum parum longioribus, vix latioribus, prope humeros latissimis, sat profunde et confertissime punctatis, vel asperatis, lateribus marginatis, vix rotundatis, apicibus sat latis, modice rotundatis; abdomine rufescente; pedibus atque antennis prælongis, flavis. Long. corp. 1·25 millim.; lat. 0·75 millim.

Body broadly ovate, convex, and very shining, moderately and distinctly punctured, yellow. *Head* moderate; eyes black, large, and rather prominent; antennæ very long, yellow. *Thorax* moderate, widest at the

base, moderately and distinctly punctured, with the interstices smooth and shining; sides moderately rounded and margined; basal margin not sinuated, produced towards the scutellum, with the angles acute. *Scutellum* covered by the thorax. *Elytra* rufo-testaceous, with the disc more or less dusky, rather longer but scarcely broader than the head and thorax, widest near the shoulders, rather deeply and very closely punctured; almost asperated, sides margined, but scarcely rounded; extremities rather broad and moderately rounded. *Abdomen* moderate, rufescent. *Legs* very long, yellow. *Underparts* testaceous, with the pectus dusky.

Hab. GUATEMALA, Zapote, Capetillo (*Champion*).

Differs from *S. lunatum* in its less convex form, much deeper sculpture, dusky pectus, and generally in the dusky disc of the elytra.

5. **Scaphisoma luteipes.**

Scaphisoma luteipes, Oberthür, Col. Nov. i. p. 15 (1883)[1].

"Ovale, sat latum, convexum, nitidum, piceum, apice tenuiter luteo-marginatum, pedibus antennisque flavidis vel testaceis, subtiliter punctulatum. Elytra validius cribrata, stria suturali minuta basi subarcuata. Long. $1\frac{3}{4}$ millim.; lat. $1\frac{1}{5}$ millim."

Hab. PANAMA, Matachin (*Thième*[1]).

"Ovale, convexe, assez élargi, luisant, noir avec l'extrémité inférieure des élytres finement rebordée de jaune, les pattes et les antennes de cette même couleur. Corps très-finement ponctué en dessus; élytres pourvues d'une ponctuation plus forte, avec une fine strie suturale à peine visible légèrement arquée à la base.

"Nous possédons deux exemplaires de cette espèce, qui sont en entier d'une couleur testacée; probablement ces exemplaires sont immatures.

"Voisin de *S. terminatum*, mais plus petit."

The coarse punctuation of the elytra separates *S. luteipes* from the other species here enumerated. The diagnosis gives 'piceous' as the colour, though the two examples are subsequently stated to be entirely testaceous.

6. **Scaphisoma thoracicum,** sp. n.

Elongato-ovatum, nitidissimum, confertim et sat profunde punctatum, aterrimum; capite modico; oculis magnis, haud prominentibus; pronoto magno, valde convexo, modice et confertim punctato, interstitiis glabris, nitidis, lateribus marginatis et valde rotundatis, margine basali sinuata, scutellum versus producta, angulis acutis; elytris longis, sat angustis, quam caput atque pronotum vix latioribus, sesqui-longioribus, prope humeros latissimis, profunde et confertim punctatis, interstitiis longitudinaliter et irregulariter strigosis, stria suturali profunda, lateribus sat late marginatis, vix rotundatis, apicibus latis, fere rectis; abdomine acuminato, piceo; pedibus nigris, tarsis rufis; antennis modicis, piceis, articulis basalibus dilutioribus. Long. corp. 3·50 millim.; lat. 2 millim.

Body elongate ovate, very shining, closely and rather deeply punctured, deep black. *Head* moderate; eyes large, not prominent; antennæ moderate, piceous, with the basal joints pale. *Thorax* large, very convex, moderately and closely punctured, with the interstices smooth and shining; sides margined, and much rounded; basal margin sinuated, produced towards the scutellum, with the angles acute. *Scutellum* very small, triangular. *Elytra* long and rather narrow, scarcely broader but one half longer than the head and thorax, widest near the shoulders, deeply and closely punctured, with the interstices longitudinally and irregularly strigose; sutural stria deep; sides rather broadly margined, scarcely rounded; extremities broad and nearly straight. *Abdomen* acuminate, piceous. *Legs* black, with the tarsi rufous. *Underparts* black, with the terminal segments of the venter rufo-piceous; metasternum deeply punctured.

Hab. MEXICO, Jacale, Volcan de Orizaba (*Sallé*).

Differs from the other Central-American species in its large size, convex and rather narrow form, thorax rounded in front, and in sculpture.

7. **Scaphisoma guatemalense,** sp. n.

Late ovatum, convexum, nitidissimum, minute punctatum, vel nigro-piceum, vel castaneum pronoto apicibusque elytrorum piceis; capite magno, lato, remote punctato; oculis modicis, haud prominentibus; pronoto sat parvo, ad basin latissimo, indistincte punctato, interstitiis glabris, nitidis, lateribus leviter marginatis et leviter rotundatis, margine basali haud sinuata, scutellum versus producta, angulis rectis; elytris plerumque castaneis, sat longis, quam caput atque pronotum latioribus et plus quam sesqui-longioribus, ante media latissimis, modice et sat remote punctatis, interstitiis glabris, nitidis, lateribus leviter marginatis et leviter rotundatis, apicibus latis, rotundatis; abdomine acuminato, læte rufescente; pedibus atque antennis modicis, læte rufescentibus. Long. corp. 2·75 millim.; lat. 1·75 millim.

Body broadly ovate, convex and very shining, minutely punctured, either pitchy black or castaneous with the thorax and apex of the elytra piceous. *Head* large and broad, remotely punctured; eyes moderate, not prominent; antennæ moderate, rufescent. *Thorax* rather small, widest at the base; indistinctly punctured, with the interstices smooth and shining; sides slightly margined and a little rounded; basal margin not sinuated, produced towards the scutellum, with the angles rectangular. *Scutellum* small, triangular. *Elytra* generally castaneous, rather long, broader and more than one half longer than the head and thorax, widest before the middle; moderately and rather remotely punctured, with the interstices smooth and shining; sides slightly margined and a little rounded; extremities broad and rounded. *Abdomen* acuminate, brightly rufescent. *Legs* moderate, bright rufous. *Underparts* rufescent.

Hab. GUATEMALA, Zapote, Capetillo (*Champion*).

Numerous examples. Differs from *S. bilimeki* in its larger size, broader form, finer and remote sculpture of its elytra, and shorter legs and antennæ.

8. **Scaphisoma bilimeki.**

Scaphisoma bilimeki, Reitter, Verh. Ver. Brünn, xviii. p. 48 (1879) [1].

Late ovatum, convexum, nitidissimum, confertim punctatum, aterrimum; capite lato, brevi; oculis magnis, sat prominentibus; pronoto magno, minute et confertim punctato, interstitiis glabris, nitidis, lateribus rotundatis, vix marginatis, margine basali vix sinuata, scutellum versus valde producta, angulis fere rectis; elytris brevibus, quam caput atque pronotum parum longioribus, vix latioribus, prope humeros latissimis, profunde et confertissime punctatis, interstitiis alutaceis, stria suturali modica, lateribus leviter rotundatis, sat late marginatis, apicibus vix rotundatis, rufescentibus; abdomine rufescente; pedibus atque antennis longis, gracilibus, rufescentibus. Long. corp. 2·25 millim.; lat. 2 millim.

Body broadly ovate, convex, and very shining, closely punctured, deep black. *Head* broad and short; eyes large and rather prominent; antennæ long and slender, rufescent. *Thorax* large, minutely and closely punctured, with the interstices smooth and shining; sides rounded, scarcely margined; basal margin scarcely sinuated, much produced towards the scutellum, with the angles nearly rectangular. *Scutellum* minute, triangular, covered by the thorax. *Elytra* short, rather longer but scarcely broader than the head and thorax, widest near the shoulders; deeply and very closely punctured, with the interstices alutaceous; sutural stria moderate; sides faintly rounded, and rather broadly margined; extremities scarcely rounded, rufescent. *Abdomen* rufescent. *Legs* long and slender, rufescent. *Underparts* rufopiceous, with the mouth and venter paler.

Hab. MEXICO, Teapa [1], Guanajuato (*Sallé*).

Differs from the preceding species in its smaller size, short and broad form, deep sculpture of the elytra, and rufescent legs and antennæ. The examples before me agree sufficiently well with Reitter's description of *S. bilimeki* to be identified therewith.

9. **Scaphisoma neotropicale,** sp. n.

Ovale, valde convexum, glabrum, nitidum, indistincte punctatum, aterrimum ; capite modico, indistincte punctato ; oculis magnis, sat prominentibus ; pronoto modico, ad basin latissimo, antice valde convexo, minute et indistincte punctato, interstitiis glabris, nitidis, lateribus rotundatis, leviter marginatis, margine basali fere recta, angulis sat obtusis ; elytris sat longis, quam caput atque pronotum parum latioribus, fere duplo longioribus, ante media latissimis, leviter et indistincte striatim punctatis, ad suturam sat depressis, stria suturali modica, lateribus marginatis et modice rotundatis, apicibus sat angustatis, modice rotundatis, dilutioribus ; abdomine sat brevi, nigro, ad apicem rufescente ; pedibus sat brevibus, rufo-piceis ; antennis longis, rufescentibus. Long. corp. 2·25 millim. ; lat. 1·75 millim.

Body oval, very convex, smooth and shining, indistinctly punctured, deep black. *Head* moderate, indistinctly punctured ; eyes large and rather prominent ; antennæ long, rufescent. *Thorax* moderate, widest at the base, very convex in front, minutely and indistinctly punctured, with the interstices smooth and shining ; sides rounded and slightly margined ; basal margin nearly straight, produced towards the scutellum, with the angles rather obtuse. *Scutellum* very small, covered by the thorax. *Elytra* rather long, rather broader and nearly twice longer than the head and thorax, widest before the middle, faintly and indistinctly punctured in striæ, rather depressed at the suture ; sutural stria moderate ; sides margined and moderately rounded ; extremities rather narrow and moderately rounded, paler. *Abdomen* rather short, black, rufescent towards the apex. *Legs* rather short, rufo-piceous. *Underparts* piceous, with the last ventral segment rufescent.

Hab. Mexico, Teapa (*Sallé*) ; Guatemala, Calderas 7000 feet (*Champion*) ; Panama, Volcan de Chiriqui (*Champion*).

Differs from *S. puncticolle* in its larger size, and smooth and almost impunctate thorax.

10. **Scaphisoma puncticolle,** sp. n.

Late ovatum, valde convexum, nitidissimum, pronoto profunde et confertissime punctato, aterrimum ; capite magno, lato ; oculis magnis, haud prominentibus ; pronoto magno, ad basin latissimo, antice sat angustato, profunde et confertissime punctato, interstitiis glabris, nitidis, lateribus marginatis et modice rotundatis, margine basali vix sinuata, scutellum versus producta, angulis acutis ; elytris brevibus et latis, quam caput atque pronotum vix longioribus aut latioribus, ad humeros latissimis, sat profunde sed indistincte punctatis, interstitiis glabris, nitidis, lateribus marginatis et rotundatis, apicibus ferrugineis et leviter rotundatis ; abdomine modico, nigro, segmentorum marginibus rufo-piceis ; pedibus modicis, rufis ; antennis modicis, rufescentibus. Long. corp. 1·75 millim. ; lat. 1·25 millim.

Body broadly ovate, very convex, and very shining, deeply and very closely punctured on the thorax, deep black. *Head* large and broad ; eyes large, not prominent ; antennæ moderate, rufescent. *Thorax* large, widest at the base, rather narrow in front, deeply and very closely punctured, with the interstices smooth and shining ; sides margined and moderately rounded ; basal margin scarcely sinuated, produced towards the scutellum, with the angles acute. *Scutellum* small, covered by the thorax. *Elytra* short and broad, scarcely longer or broader than the head and thorax, widest at the shoulders, rather deeply but indistinctly punctured, the interstices smooth and shining ; sides margined and rounded ; extremities slightly rounded, and ferruginous. *Abdomen* moderate, black, with the edges of the segments rufo-piceous. *Legs* moderate, red. *Underparts* piceous, with the edges of the segments rufo-piceous.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Numerous examples. Differs from the allied forms in its short and broad form, and especially in the deep and close sculpture of its thorax.

11. **Scaphisoma breve,** sp. n.

Breve, latum, valde convexum, nitidum, minute et sat remote punctatum, nigrum ; capite magno, lato ; oculis

magnis, haud prominentibus; pronoto sat magno, ad basin latissimo, minute et sat remote punctato, interstitiis glabris, nitidis, lateribus marginatis et rotundatis, margine basali leviter rotundata, scutellum versus producta, angulis fere rectis; elytris brevibus, nigris ad apices ferrugineis, quam caput atque pronotum vix longioribus aut latioribus, ad humeros latissimis, modice punctatis, interstitiis glabris, nitidis, stria suturali leviter impressa, lateribus leviter marginatis, vix rotundatis, apicibus latis, rotundatis; abdomine parum exserto, nigro; pedibus atque antennis modicis, rufescentibus. Long. corp. 1·50 millim.; lat. 1 millim.

Body short and broad, very convex, shining, minutely and rather remotely punctured, black. *Head* large and broad; eyes large, not prominent; antennæ moderate, rufescent. *Thorax* rather large, widest at the base, minutely and somewhat remotely punctured, with the interstices smooth and shining; sides margined and rounded; basal margin faintly rounded, produced towards the scutellum, with the angles nearly rectangular. *Scutellum* covered by the thorax. *Elytra* short, black, with the extremities ferruginous, scarcely longer or broader than the head and thorax, widest at the shoulders, moderately punctured, with the interstices smooth and shining; sutural stria not deep; sides slightly margined, scarcely rounded; extremities broad and rounded. *Abdomen* not much exposed, black. *Legs* moderate, rufescent. *Underparts* black, with the edges of the ventral segments rufescent.

Hab. PANAMA, Bugaba (*Champion*).

This species is distinguished chiefly by its short and broad form, black colour, and sculpture.

12. **Scaphisoma punctatissimum,** sp. n.

Breve, latum, valde convexum, nitidum, profunde et confertim punctatum, nigrum, elytris obscure castaneis; capite magno, lato; oculis magnis, haud prominentibus; pronoto magno, ad basin latissimo, profunde et confertim punctato, interstitiis glabris, nitidis, lateribus marginatis, vix rotundatis, margine basali haud sinuata, scutellum versus producta, angulis rectis; elytris vel nigris vel castaneis, quam caput atque pronotum parum longioribus, vix latioribus, prope humeros latissimis, profunde et confertim punctatis, interstitiis glabris, nitidis, lateribus leviter marginatis, vix rotundatis, apicibus modicis, ferrugineis et leviter rotundatis; abdomine rufescenti; pedibus atque antennis modicis, læte rufis, harum articulo sexto magis incrassato. Long. corp. 1·40 millim.; lat. 0·50 millim.

Body short and broad, very convex and shining, deeply and closely punctured, black, with the elytra sometimes castaneous. *Head* large and broad; eyes large, not prominent; antennæ moderate, bright rufous, with the sixth joint considerably incrassate. *Thorax* large, widest at the base, deeply and closely punctured, with the interstices smooth and shining; sides margined and faintly rounded; basal margin not sinuated, produced towards the scutellum, with the angles rectangular. *Scutellum* covered by the thorax. *Elytra* either black or castaneous, rather longer but scarcely broader than the head and thorax, widest near the shoulders, deeply and closely punctured, with the interstices smooth and shining; sides slightly margined, scarcely rounded; extremities ferruginous, and slightly rounded. *Abdomen* rufescent. *Legs* moderate, bright rufous. *Underparts* rufo-piceous, with the coxæ and the edges of the ventral segments rufescent; metasternum and first ventral segment deeply and closely punctured.

Hab. GUATEMALA, San Isidro (*Champion*).

Differs from *S. breve* in its rather small size, narrower form, deep sculpture, and more incrassate antennæ.

13. **Scaphisoma longicolle,** sp. n.

Ovale, convexum, glaberrimum, nitidissimum, aterrimum; capite brevi, lato; oculis magnis, haud prominentibus; pronoto modico, ad basin latissimo, glaberrimo, nitidissimo, lateribus leviter rotundatis et leviter marginatis, margine basali haud sinuata, scutellum versus producta, angulis acutis, sat productis; elytris quam caput atque pronotum parum longioribus, haud latioribus, ad humeros latissimis, glaberrimis et

nitidissimis, stria suturali profunda, lateribus vix rotundatis, leviter marginatis, apicibus ferrugineis, modice rotundatis; abdomine nigro, apice rufescenti; pedibus modicis, rufis; antennis modicis, rufescentibus, clavis modice incrassatis. Long. corp. 1·50 millim.; lat. 0·75 millim.

Body oval, convex, very smooth and very shining, deep black. *Head* short and broad; eyes large, not prominent; antennæ moderate, rufescent, with the club but slightly incrassated. *Thorax* moderate, widest at the base, very shining and very smooth; sides a little rounded and slightly margined; basal margin not sinuated, produced towards the scutellum, with the angles acute and rather produced. *Scutellum* covered by the thorax. *Elytra* rather longer, but not broader than the head and thorax, widest at the shoulders, very smooth and very shining; sutural stria deep; sides scarcely rounded and slightly margined; extremities ferruginous, moderately rounded. *Abdomen* black, with the apex rufescent. *Legs* moderate, rufous. *Underparts* black, with the apex of the venter rufous.

Hab. Mexico, Teapa and Frontera in Tabasco (*Höge*); British Honduras, R. Hondo (*Blancaneaux*).

Differs from all our other species in its smooth, very shining, impunctate surface.

TOXIDIUM.

Toxidium, Leconte, Proc. Acad. Phil. 1860, p. 324.

Antennæ 11-jointed—1 and 2 rather large; 3–6 very slender, incrassated on the inner side; 8 not incrassated; 9–11 moderately incrassated on the inner side, forming an elongate moniliform club, 11 the longest and oval in shape. *Maxillary palpi* long and slender, 4-jointed—1 minute; 2 and 3 subcylindric, equal; 4 very long, acutely acuminate. *Labial palpi* rather large, distinctly 4-jointed—1, 2, and 3 subquadrate, transverse, nearly equal; 4 much longer than 3, and more slender, strongly incurved. *Labrum* large, much dilated, much rounded and broadly transparent at the sides, faintly emarginate in front. *Mandibles* rather long, hooked and bifid at the apex, furnished with a ciliated appendage above the middle. *Maxilla* very robust, bilobed; the outer lobe very broadly dilated towards the apex, with the apex circularly rounded, and deeply and strongly pectinated; the inner lobe rather robust, and armed at the apex with long incurved setiform teeth; stipes very robust. *Mentum* elongate, suboblong, widest at the base. *Labium* suboblong, widest in front. *Lingua* very large and broad, emarginate in front. *Prosternum* very small; *episterna* rather large, triangular; *epimera* very narrow, linear; coxal cavities extending into the mesosternum. *Mesosternum* large, carinated between the anterior coxæ, and produced into a lanciform point; *episterna* humeral, long, and narrow; *epimera* very small, linear, not extending more than halfway to the coxal cavities. *Metasternum* moderate, not extending to the sides of the body, with the hinder margin concave between the coxæ; *episterna* moderate, rather narrow, extending to the coxæ; *epimera* narrow, very little inflected beyond the episterna. *Venter* composed of five segments—1 and 5 long, 2, 3, 4 short. *Legs* moderate; tibiæ spinose; tarsi 5-jointed, 1 the longest. *Coxæ*: *anterior* prominent and contingent; *intermediate* moderately distant; *posterior* very near, not contingent.

This genus contains five described species, from North America, Japan, &c.; a similar number inhabit Mexico or Central America, four of which are here treated as new.

Epitome of the Species.

L. c. 2·40 mm. Compressed, elongate, almost impunctate; black, with two indistinct crimson fasciæ on the elytra; legs and antennæ rufous . . . . . *bifasciatum.*

L. c. 2 mm. Elongate oval, narrow, very shining; elytra deeply punctured, deep black; legs and antennæ long, rufescent . . . . . *punctatum.*

L. c. 2 mm. Compressed, narrow, very shining, almost impunctate, deep black; legs and antennæ moderate, rufo-piceous . . . . . *gammaroides.*

L. c. 1·50 mm. Narrowly ovate, very shining, almost impunctate, deep black; legs rufo-piceous; antennæ short, moniliform, rufescent . . . . . *ovatum.*

L. c. 1·25 mm. Short, oval, nearly smooth, black; legs and antennæ short, piceous *parvum.*

1. **Toxidium bifasciatum,** sp. n. (Tab. IV. fig. 14.)

Compressum, elongatum, arcuate convexum, nitidissimum, fere impunctatum, nigrum, fasciis duabus kermesinis in elytris indistincte ornatum; capite sat magno, piceo; oculis modicis, haud prominentibus; pronoto sat longo, ad basin latissimo, punctis minutis indistincte et remotissime notato, interstitiis glabris, nitidis, lateribus leviter marginatis et vix rotundatis, margine basali haud sinuata, scutellum versus producta, angulis acutis; elytris quam caput atque pronotum haud latioribus, plus quam sesqui-longioribus, ad humeros latissimis, superficie inæquali, vix punctata, nigris fascia angusta, kermesina, prope humeros, atque altera simili prope apices indistincte ornatis, stria suturali leviter impressa, lateribus marginatis, leviter rotundatis, apicibus angustatis, abrupte truncatis; abdomine parum exserto, nigro; pedibus longis, rufis; antennis longis, rufescentibus. Long. corp. 2·40 millim.; lat. 1 millim.

Body compressed, elongate, arcuately convex, very shining, almost impunctate; black, ornamented with two narrow, indistinct, crimson fasciæ on the elytra. *Head* rather large, piceous; eyes moderate, not prominent; antennæ long, rufescent. *Thorax* rather long, widest at the base, minutely, indistinctly, and very remotely punctured, with the interstices smooth and shining; sides slightly margined and faintly rounded; basal margin not sinuated, produced towards the scutellum, with the angles acute. *Scutellum* minute, triangular, partly uncovered. *Elytra* more than one half longer but not broader than the head and thorax, widest at the shoulders, with the surface uneven, but scarcely punctured; black, with a narrow crimson fascia near the shoulders, and another near the apex, both rather indistinct; sutural stria faint; sides margined, scarcely rounded; extremities narrow, abruptly truncate. *Abdomen* black, not much exserted. *Legs* long, red. *Underparts* piceous, with the edges of the ventral segments rufescent.

Hab. Guatemala, Capetillo, San Gerónimo (*Champion*).

Differs from our other species in its larger size, fasciated elytra, and longer antennæ.

2. **Toxidium punctatum,** sp. n.

Elongato-ovale, angustum, arcuate convexum, nitidissimum, elytris profunde punctatis, aterrimum; capite modico, sat longo; oculis magnis, sat prominentibus; pronoto modico, ad basin latissimo, minute, remote, sed distinctissime punctato, interstitiis glabris, nitidis, lateribus sat late marginatis, margine basali leviter rotundata, scutellum versus leviter producta, angulis acutissimis; elytris longis, quam caput atque pronotum plus quam sesqui-longioribus, vix latioribus, prope humeros latissimis, profunde et sat remote punctatis, interstitiis glabris, nitidis, stria suturali modica, lateribus marginatis, vix rotundatis, apicibus latis, fere rectis, ferrugineis; abdomine longo, rufo-piceo; pedibus longis, rufis; antennis longis, rufescentibus. Long. corp. 2 millim.; lat. 0·90 millim.

Body elongate oval, narrow, compressed, arcuately convex, very shining, with the elytra deeply punctured, deep black. *Head* moderate, rather long; eyes large and rather prominent; antennæ long, rufescent. *Thorax* moderate, widest at the base, minutely, remotely, but very distinctly punctured, with the interstices smooth and shining; sides rather strongly margined; basal margin faintly rounded, slightly produced towards the scutellum, with the angles very acute. *Scutellum* moderate, obtusely triangular, partly exposed. *Elytra* long, more than one half longer but scarcely broader than the head and thorax, widest near the shoulders, deeply and rather remotely punctured, with the interstices smooth and shining; sutural stria moderate; sides margined, but scarcely rounded; extremities broad, nearly straight, ferruginous. *Abdomen* long, rufo-piceous. *Legs* long, red. *Underparts* black, the mouth and the apex of the venter rufo-piceous; metasternum deeply punctured near the middle.

Hab. MEXICO, Toluca (*Höge*).

Differs from *T. bifasciatum* and *T. gammaroides* in its intermediate size and deep sculpture.

3. **Toxidium gammaroides.** (Tab. IV. fig. 15.)

Toxidium gammaroides, Lec. Proc. Acad. Phil. 1860, p. 324[1].

Compressum, angustum, arcuate convexum, nitidissimum, fere impunctatum, aterrimum; capite sat magno; oculis modicis, haud prominentibus; pronoto magno, ad basin latissimo, punctis exiguis remote impresso, superficie glabra, nitidissima, lateribus marginatis, leviter rotundatis, margine basali haud sinuata, scutellum versus producta, angulis acutis; elytris modicis, quam caput atque pronotum parum longioribus, vix latioribus, ad humeros latissimis, fere glabris, nitidissimis, punctis exiguis remote impressis, lateribus leviter marginatis, vix rotundatis, apicibus latis, fere rectis, dilutioribus; abdomine parum exserto, nigro; pedibus atque antennis modicis, rufo-piceis. Long. corp. 2 millim.; lat. 0·80 millim.

Body compressed, narrow, arcuately convex, very shining, almost impunctate, deep black. *Head* rather large; eyes moderate, not prominent; antennæ moderate, rufo-piceous. *Thorax* large, widest at the base, remotely marked with exceedingly minute punctures, smooth and very shining; sides margined and faintly rounded; basal margin not sinuated, produced towards the scutellum, with the angles acute. *Scutellum* moderate, triangular, partly exposed. *Elytra* moderate, rather longer but scarcely broader than the head and thorax, widest at the shoulders, nearly smooth and very shining, remotely marked with very minute punctures; sides slightly margined, scarcely rounded; extremities broad, nearly straight, and pale. *Abdomen* not much exposed, black. *Legs* moderate, rufo-piceous. *Underparts* black, with several large and deep punctures on the metasternum.

Hab. NORTH AMERICA, Southern and Western States[1].—MEXICO, Jalapa (*Höge*); GUATEMALA, Zapote (*Champion*).

Differs from *T. bifasciatum* in its smaller size, shorter form, shorter legs and antennæ, and uniform black colour.

4. **Toxidium ovatum,** sp. n.

Anguste ovatum, arcuate convexum, nitidissimum, fere impunctatum, aterrimum; capite magno, lato; oculis magnis, sat prominentibus; pronoto magno, lato, ad basin latissimo, antice capite angustiore, glabro, nitidissimo, lateribus leviter marginatis et leviter rotundatis, margine basali haud sinuata, scutellum versus producta, angulis acutis; elytris quam caput atque pronotum sesqui-longioribus, vix latioribus, prope humeros latissimis, superficie sat inæquali, glabra, nitidissima, stria suturali distincta, lateribus leviter marginatis, vix rotundatis, apicibus sat latis, modice rotundatis, rufo-piceis; abdomine nigro, vix exserto; pedibus brevibus, rufo-piceis; antennis robustis, sat brevibus, moniliformibus, nitidis, rufescentibus. Long. corp. 1·50 millim.; lat. 0·80 millim.

Body narrowly ovate, arcuately convex, very shining, nearly impunctate, deep black. *Head* large and broad; eyes large and rather prominent; antennæ rather short, robust, moniliform, and very shining, rufescent. *Thorax* large and broad, widest at the base, in front narrower than the head, smooth and very shining; sides slightly margined and faintly rounded; basal margin not sinuated, produced towards the scutellum, with the angles acute. *Scutellum* small, triangular, partly exposed. *Elytra* one half longer but scarcely broader than the head and thorax, widest near the shoulders, with the surface rather uneven, smooth, and very shining; sutural stria distinct; sides slightly margined, scarcely rounded; extremities rather broad, moderately rounded, rufo-piceous. *Abdomen* black, not much exserted. *Legs* short, rufo-piceous. *Underparts* black.

Hab. GUATEMALA, Totonicapam 10,000 feet (*Champion*).

One example only. Differs from all our other species in its broader ovate form, short legs, and very peculiarly formed antennæ.

5. **Toxidium parvum,** sp. n.

Breve, ovale, valde convexum, nitidissimum, fere glabrum, elytris indistincte punctatis, nigrum; capite modico; oculis modicis, haud prominentibus; pronoto modico, ad basim latissimo, glabro, nitidissimo, lateribus leviter marginatis et leviter rotundatis, margine basali haud sinuata, scutellum versus late producta, angulis acutis; elytris modicis, quam caput atque pronotum plus quam sesqui-longioribus, et parum latioribus, ante media latissimis, distincte sed non profunde punctatis, superficie glabra, nitida, stria suturali distincta, lateribus leviter marginatis, vix rotundatis, apicibus rotundatis, dilutioribus; abdomine minime exserto, nigro; pedibus brevibus, rufis; antennis perbrevibus, robustis, piceis. Long. corp. 1·25 millim.; lat. 0·60 millim.

Body short, oval, very convex and very shining, almost smooth, with the elytra indistinctly punctured, black. *Head* moderate; eyes moderate, not prominent; antennæ very short, robust, piceous. *Thorax* moderate, widest at the base, smooth, and very shining; sides slightly margined and a little rounded; basal margin not sinuated, broadly produced towards the scutellum, with the angles acute. *Scutellum* small, triangular, elongate, partly exposed. *Elytra* moderate, more than one half longer and rather broader than the head and thorax, widest before the middle, distinctly but not deeply punctured, with the surface smooth and shining; sutural stria distinct; sides slightly margined, scarcely rounded; extremities rounded and pale. *Abdomen* very little exposed, black. *Legs* short, red. *Underparts* black.

Hab. GUATEMALA, Balheu in Vera Paz (*Champion*).

Differs from *T. ovatum* in its much smaller size, narrower form, more evident sculpture, and shorter and non-moniliform antennæ.

I have experienced considerable difficulty in determining the species of this family, and in distinguishing between species and varieties; I cannot hope to have been successful in every case, but trust that what I have done may be of some use in helping others to a more perfect knowledge. In many of the published descriptions which I have examined, the distinctive characters are not made sufficiently prominent; this is especially the case in the genus *Scaphisoma*, whose species are both numerous and obscure, and it is possible that some of those which I have treated as new will eventually prove to have been previously described by other authors. As an instance of this, *Scaphisoma guatemalense* and *S. neotropicale* appeared to me to resemble *S. castaneum* and *S. convexum*, Lec., so strongly, that for a long time I felt convinced they were synonymous, and it was with much hesitation that I changed my opinion; the comparison of typical specimens can alone settle these points.

Fam. HISTERIDÆ *.

The Central-American representatives of this family are arranged under 28 genera and include upwards of 240 species; two genera and about one third of the total number of species are described as new. The chief interest of the series centres in the species which feed on the wood-boring Coleoptera of other families, and owing to the excellent methods which have been employed in obtaining the specimens the new and interesting species of this class are numerous. New forms of *Tryponæus* and *Teretriosoma* (eight of the former and five of the latter), which belong to some of the more curious forms of the Coleoptera, have been brought to light; and the greater part of them are recorded as coming from the forests of considerable elevation, places which have now been visited almost for the first time for systematic collecting. The myrmecophilous species are very few in number; two very remarkable genera, *Terapus* and *Renia*, however, inhabit Mexico. The *Saprini*, although fairly numerous, do not give many novelties, but this may be accounted for by their inhabiting the plains and alluvial districts, which have always been easy of access to ordinary collectors; and also from the facility with which insects of their habits, congregating in numbers where they find their food, fall into the hands of entomologists. Amongst the 'Hololeptini' *Lioderma dorcoides* and *Hololepta canalicollis* are remarkable for their specific characters; but in the other species of this group there is a uniformity of appearance and structure which renders special notice of them unnecessary. *Oxysternus* is not as yet known from Central America; it may, however, be found eventually on the Isthmus of Panama.

In a faunistic analysis of the genera it is important to observe the presence of such a small number of species of *Platysoma*. In the Eastern Archipelago similar methods to those employed in amassing this collection would probably have resulted in the capture of sixty or eighty species, even if the investigation should be limited to the area of one or two islands; so that it seems as though the functions of *Platysoma* are carried on in Central America by *Paromalus*, *Phelister*, and the larger species of *Carcinops* and *Epierus*, genera which contain many species of subcortical habits, and all especially abundant in the tropics of America.

Of the remarkable genus *Homalopygus* two species are now known from Central America.

PHYLLOMA.

Phylloma, Erichson in Klug's Jahrb. der Ins. 1834, p. 96.

This genus includes ten species, all from Central or Tropical South America. With the exception of *P. corticale*, Fabr., the species are all rare and only represented in our cabinets by a very few specimens.

* By G. Lewis.

1. **Phylloma corticale.**

Hister corticalis, Fabr. Syst. Eleuth. i. p. 91[1].
Hololepta corticalis, Payk. Monogr. Hist. p. 106, t. 9. fig. 2[2].
Phylloma corticale, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 193, t. 5. fig. 1[3].

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Cubilguitz, Cahabon, and Lanquin in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).—GUIANA, Cayenne[1 2]; BRAZIL, Pará[3], Santa Catarina[3].

2. **Phylloma plagigerum,** sp. n. (Tab. IV. fig. 16.)

Oblongo-ovatum, depressum, nigrum, nitidum; fronte plana, dente oculari; mandibulis longis; pronoto lateribus parce punctulato marginatoque; elytris margine inflexo, striis dorsalibus brevibus, appendicula nulla; propygidio bifoveolato, circum punctato; pygidio dense fortiterque punctato. Long. 9 millim.

Hab. GUATEMALA, Las Mercedes 3000 feet, Cerro Zunil 4000 feet (*Champion*).

Two examples only. In facies this species resembles *P. maragnoni*, Mars., from the Amazons, with the type of which it has been compared. The absence of a third stria to the elytra and the more coarsely punctured pygidium will serve as characters to distinguish it.

3. **Phylloma facetum,** sp. n. (Tab. IV. figg. 17, 17 *a*.)

Ovale, breve, convexiusculum, læve, nitidum; fronte subtiliter punctulata; mandibulis bidentatis; pronoto lateribus punctulato marginatoque; elytris striis 3 dorsalibus brevibus, 2ª appendiculata; propygidio circum parce punctato, apice bifoveolato; pygidio dense et grosse punctato, circum late marginato; tibiis anticis 3-dentatis. Long. 5–6 millim.

Hab. PANAMA, Bugaba (*Champion*).

Twelve specimens. In outline and general sculpture this species is very similar to *P. bahiense*, Mars. It differs chiefly in the pygidium being marginate (fig. 17 *a*). In one example the first dorsal stria of the elytra is complete, but in ten other specimens there is no variation.

HOLOLEPTA.

Hololepta, Paykull, Monogr. Hist. p. 101 (1811).

About sixty-seven species of this genus have been catalogued, and ten or twelve undescribed forms are known in collections. Only one occurs in Europe, and the nearer the equator is approached the more numerous the species become. At present the New World has produced the greater number of representatives, but it is unlikely this proportion will be maintained when the Eastern Tropics are as thoroughly investigated. Some of the species are insectivorous, and others feed on the rancid oozing sap of wounded trees. In the New World, according to Mr. Champion, they frequent the running sap of various trees, including that of the coco and other large palms.

1. Hololepta excisa.

Hololepta excisa, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 148, t. 4. figg. 6, 6 *a–e* [1].
Hololepta lucida, Dej. Cat. 3rd edit. p. 144 [2].

Hab. North America [2], United States [1].—Mexico [1], Cordova, Playa Vicente (*Sallé*), Esperanza, Mexico city (*Höge*); Guatemala, Las Mercedes, Pantaleon, Mirandilla, San Lucas, Capetillo, Cahabon, Lanquin (*Champion*).—South America, Colombia and Venezuela to Brazil [1].

2. Hololepta sublucida.

Hololepta sublucida, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 149, t. 4. fig. 7 [1].

Hab. Guatemala, Cahabon, Las Mercedes (*Champion*).—Colombia, Cartagena [1].

Mr. Champion met with three examples of this species in Guatemala.

3. Hololepta obscura.

Hololepta obscura, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 150, t. 4. fig. 8 [1].
Hololepta pizarri, Mars. loc. cit. 1857, Cat. p. 468 [2].

Hab. Mexico [1 2], Playa Vicente, Cordova (*Sallé*), Bobo, Jalapa (*Höge*).

4. Hololepta colombiana.

Hololepta colombiana, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 154, t. 4. fig. 12 [1].

Hab. Nicaragua, Chontales (*Janson*); Panama, Bugaba 800 to 1500 feet, Volcan de Chiriqui (*Champion*).—Venezuela, Caracas [1].

5. Hololepta guidonis.

Hololepta guidonis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 595, t. 11. fig. 7 [1].

Hab. Mexico [1].

This species is not represented in the collection before us.

6. Hololepta pontavicei.

Hololepta pontavicei, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 594, t. 11. fig. 6 [1].

Hab. Mexico [1], Cordova (*Sallé*, *Höge*), Tuxtla (*Sallé*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, El Reposo, Zapote, Capetillo, Teleman, Chacoj (*Champion*).

7. Hololepta populnea.

Hololepta populnea, Lec. Ann. Lyc. N. York, v. p. 163 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 592, t. 11. fig. 5 [2].

Hab. North America, California [2], Colorado River [1].—Mexico, Northern Sonora (*Morrison*).

One example from Sonora.

8. **Hololepta canalicollis,** sp. n. (Tab. IV. fig. 18, ♂.)

Ovalis, depressa, nigra, nitida; fronte absque striolis vel obsoleta, subtilissime punctulata, ad oculum fortiter dentata; pronoto impunctato, margine anguste canaliculato; elytris striis 2 dorsalibus brevibus; propygidio circum parce parum grosse punctato, apice bifoveolato; pygidio dense ocellato-punctato; tibiis anticis 4-, posticis 3-dentatis. Long. 8–8½ millim.

Hab. GUATEMALA, Capetillo, San Lucas, San Gerónimo (*Champion*).

This species resembles *H. vulpes*, Mars., from which it is distinguished by the absence of an appendicle to the outer elytral stria, by the fewer and less oblong punctures on the propygidium, and by the margin of the thorax being canaliculate in the male.

9. **Hololepta vulpes.** (Tab. IV. fig. 19.)

Hololepta vulpes, Mars. Ann. Soc. Ent. Belg. xiii. p. 58[1].

Hab. MEXICO[1], Cordova (*Sallé*); BRITISH HONDURAS (*Blancaneaux*); PANAMA, Bugaba 1500 feet (*Champion*).

One example from each locality.

10. **Hololepta subhumilis.**

Hololepta subhumilis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 179, t. 4. fig. 21, and 1857, Cat. p. 468[1].

Hab. MEXICO[1], Tuxtla (*Sallé*), Cordova (*Höge*); GUATEMALA, Senahu and San Juan in Vera Paz (*Champion*).

11. **Hololepta attenuata.**

Hololepta attenuata, Blanch. Voy. d'Orb., Col. p. 68[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 182, t. 4. fig. 24[2].

Hololepta tenuata, Mars. loc. cit. 1862, Cat. p. 703.

Hab. BRITISH HONDURAS (*Blancaneaux*); PANAMA, Taboga Island (*Champion*).—BOLIVIA, Santa Cruz[1 2].

Three examples.

12. **Hololepta aradiformis.**

Hololepta aradiformis, Erichs. in Klug's Jahrb. der Ins. 1834, p. 93[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 181, t. 4. fig. 23[2].

Hab. MEXICO, Teapa, Cordova (*Sallé*), Bobo (*Höge*), N. Yucatan (*Gaumer*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Teleman (*Champion*); PANAMA, Bugaba 800 to 1500 feet (*Champion*).—GUIANA, Cayenne[2]; BRAZIL[1], Pará[2].

13. **Hololepta meridana.**

Hololepta meridana, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 184, t. 4. fig. 25[1].

Hab. MEXICO, Merida in Yucatan (*Pilate and Chevrolat*[1]), Teapa, Cordova (*Sallé*); GUATEMALA, Yzabal (*Sallé*).

14. **Hololepta pygolissa.**

Hololepta pygolissa, Mars. Ann. Soc. Ent. Belg. xiii. p. 59[1].

Hab. GUATEMALA, Cerro Zunil, Panajachel, Zapote, San Gerónimo, Balheu (*Champion*); PANAMA [1], Volcan de Chiriqui (*Champion*).

15. **Hololepta cayennensis.**

Hololepta cayennensis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 180, t. 4. fig. 22[1].

Hab. GUATEMALA, Torola 1000 feet (*Champion*).—GUIANA, Cayenne [1].

One example from Guatemala.

16. **Hololepta bogotana.**

Hololepta bogotana, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 184, t. 4. fig. 26[1].
Hololepta consimilis, Dej. Cat. 3rd edit. p. 144[2].

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Yzabal (*Sallé* [1]), Chacoj, Teleman, Cahabon (*Champion*).—COLOMBIA, Cartagena [2]; VENEZUELA, Caracas [1].

17. **Hololepta placida,** sp. n.

Ovata, complanata, nigra, nitida; fronte subtilissime punctulata, ad oculos dentata, stria utrinque arcuata; pronoto lateribus parum dense punctulato, marginato; elytris striis 1ª dorsali brevi, 2ª brevissima, longius appendiculata, sulco subhumerali lato, ad basin abbreviato; propygidio in medio lævi, extus sparse et valide punctato; pygidio transversim punctato; mesosterno utrinque marginato; tibiis anticis 4-, posticis 3-dentatis. Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).

Two examples, both females. This species has the facies of, and many characters in common with, *H. morator*, Mars., from Cayenne; but the forehead is more finely punctulate, the pygidium more strongly punctured, and the length 2 millim. greater.

18. **Hololepta quadriformis.**

Hololepta quadriformis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 186, t. 4. fig. 27[1]; Dej. Cat. 3rd edit. p. 144[2].

Hab. MEXICO, Cordova, Playa Vicente (*Sallé*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, El Tumbador, El Reposo, Zapote, Teleman (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—GUIANA, Cayenne [2]; BRAZIL [1].

19. **Hololepta belti.**

Hololepta belti, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xvi. p. 205[1].

Hab. NICARAGUA, Chontales (*Belt* [1], *in coll. Lewis*).

One example.

LIODERMA.

Leionota (Dej.), Marseul, Monogr. in Ann. Soc. Ent. Fr. 1853, p. 196 (olim).
Lioderma, Marseul, loc. cit. 1857, Cat. p. 469.

Authors have assigned about thirty species to this genus, which differs from *Hololepta* chiefly in the lesser breadth of the prosternum. It is not, however, a well-defined genus, and several species in the catalogue might perhaps with equal reason be placed in *Hololepta* Two species are recorded from Africa, the others being from the American continent or the Antilles. The species are similar in habits to *Hololepta.*

1. Lioderma yucateca.

Leionota yucateca, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 203, t. 5. fig. 1, ♂[1].
Lioderma yucateca, Mars. loc. cit. 1857, Cat. p. 469, & 1860, p. 606.
Leionota grandis, Mars. loc. cit. 1853, p. 204, t. 5. fig. 2, ♀[2].
Lioderma grandis, Mars. loc. cit. 1857, Cat. p. 469.
Hololepta princeps, Lec. Proc. Ac. Phil. 1859, p. 310[3].

Hab. North America, California[3].—Mexico, Oaxaca (*Laferté & Chevrolat*[2]), Puebla, Guanajuato, Vera Cruz, Cuernavaca (*Sallé*), Esperanza, Mexico city, Jalapa, Acapulco (*Höge*), Yucatan (*Pilate*[1], *Gaumer*); ? Guatemala (*Sallé*).

2. Lioderma dorcoides, sp. n. (*Liodema dorcoides*, Tab. IV. fig. 20.)

Elongato-parallelum, nigrum, nitidum; mandibulis magnis basi validis bidentatis; fronte inæquali, utrinque brevistriata; pronoto lateribus interrupte marginato, utrinque profunde bisulcato, angulis anticis punctatis; elytris margine inflexo lævi, sulco subhumerali rugoso utrinque abbreviato, striis 1ª brevi, 2ª integra; propygidio extus late, pygidioque immarginato et sat dense, punctatis; tibiis anticis 4-, posticis 3-dentatis. Long. 12–13 millim.

Hab. Mexico, Esperanza (*Höge*).

This species agrees in some of its characters with *L. cacti* (Lec.); but it is easily distinguished by the mandibles being serrulate, with a large blunt tooth at their base, and by the pygidium being immarginate. The prosternal keel is also narrower anteriorly, and is very straight. The four examples before me appear to be all males.

3. Lioderma cacti.

Hololepta cacti, Lec. Ann. Lyc. N. York, v. p. 162[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 220[2].
Lioderma cacti, Mars. loc. cit. 1857, p. 400, t. 10. fig. 5[3], & 1860, p. 606[4].

Hab. North America, San Diego in California[1 2 3].—Mexico[4], Hacienda de Bleados (*Dr. Palmer*), Guanajuato (*Sallé*), Tula in Hidalgo, Jalapa, Esperanza (*Höge*).

Occurs in rotten masses of *Opuntia.*

4. Lioderma strigicolle.

Leionota strigicollis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 207, t. 5. fig. 5 [1].
Lioderma strigicollis, Mars. loc. cit. 1857, Cat. p. 469.

Hab. Mexico (*Chevrolat* [1]), Vera Cruz (*Sallé*), Tehuacan (*Höge*). Two examples.

5. Lioderma reichii.

Leionota reichii, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 210, t. 5. fig. 8 [1].
Lioderma reichei, Mars. loc. cit. 1857, Cat. p. 469.

Hab. Mexico, Puebla (*Sallé*).—Guiana, Cayenne [1].

There is a single example of this species from Mexico in the Sallé collection.

6. Lioderma confusum.

Leionota confusa, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 205, t. 5. fig. 3 [1].
Lioderma confusa, Mars. loc. cit. 1857, Cat. p. 469.

Hab. Mexico (*Chevrolat* [1]), Jalapa (*Höge*); Guatemala, Las Mercedes (*Champion*); Panama, Volcan de Chiriqui (*Champion*). One example from each locality.

7. Lioderma claudum.

Lioderma clauda, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 609, t. 11. no. iii. fig. 2 [1].

Hab. Mexico [1], Tuxtla (*Sallé*). Two examples.

8. Lioderma politum.

Leionota polita, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 208, t. 5. fig. 6 [1]; Sturm, Cat. 1843, p. 94 [2].
Lioderma polita, Mars. loc. cit. 1857, Cat. p. 469.
Leionota auriculata (Chevr.), Dej. Cat. 3rd edit. p. 144 [3].
Lioderma pumicata, Mars. loc. cit. 1857, Cat. p. 469.

Hab. Mexico [2 3] (*coll. Laferté* [1]), Parada, Puebla (*Sallé*), Esperanza, Jalapa, San Andres Chalchicomula (*Höge*); Guatemala, near the city (*Champion*).

9. Lioderma mexicanum.

Leionota mexicana, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 209, t. 5. fig. 7 [1].
Lioderma mexicana, Mars. loc. cit. 1857, Cat. p. 469.

Hab. Mexico [1], Jacale (*Sallé*), Pachuca and Tula in Hidalgo, Amecameca in Morelos, Cholula, Esperanza, Jalapa, San Andres Chalchicomula (*Höge*).

10. Lioderma quadridentatum.

Hister 4-*dentatus*, Fabr. Ent. Syst. i. p. 74 [1].
Hololepta 4-*dentata*, Payk. Monogr. Hist. p. 109, t. 9. fig. 4.
Leionota quadridentata, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 212, t. 5. fig. 10 [2].

Lioderma quadridentata, Mars. loc. cit. 1857, Cat. p. 469, & 1860, p. 608.
Hister surinamensis, Herbst, Käf. iv. p. 51, t. 37. fig. 1.
Hololepta platysma, Er. in Klug's Jahrb. der Ins. 1834, p. 95.
Hololepta flagellata, Kirby, Trans. Linn. Soc. xii. p. 395 [3]; Lewis, Ann. & Mag. Nat. Hist. 5th ser. xv. p. 458 (1885).

Hab. North America [1], United States [2], Texas [2], New Orleans [2].—Mexico, Cordova (*Sallé*), Bobo, Esperanza, Jalapa (*Höge*), N. Yucatan (*Gaumer*); British Honduras, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*); Guatemala, Yzabal, Panzos, El Reposo (*Champion*); Nicaragua, Chontales (*Belt*); Costa Rica (*Van Patten*); Panama, Bugaba, Volcan de Chiriqui (*Champion*), Taboga Isl. (*J. J. Walker*, *Champion*).—South America, Colombia [2], Venezuela [2], Guiana [2], Bolivia [2], Brazil [2], &c.; San Domingo [2].

The locality, Australasia, given by Kirby [3] is doubtless in error, as I have already noted (*op. cit.*).

Very abundant in Brazil and northwards to the United States.

11. **Lioderma subnitidum**, sp. n.

Oblongum, depressum, nigrum, subnitidum; fronte obscure punctulata, dente oculari striis transversis brevibus; pronoto lateribus punctato, stria marginali valida, basi continuata; elytris margine inflexo, sulco rugoso, striis dorsalibus validis, 1ª brevi, 2ª integra; propygidio grosse et parce, pygidioque dense, punctatis. Long. 7 millim.

Hab. Mexico, Bobo (*Höge*). One example.

This species should follow *L. punctulatum*, Mars., and it is in some respects intermediate between that insect and *L. minutum*, Er. The thorax is sculptured as in *L. punctulatum*, but the propygidium and the pygidium are shaped as in *L. minutum*, Er., and *L. rimosum*, Mars.; *L. subnitidum* especially resembles the latter in the small size of the punctures and in the absence of foveæ on the propygidium.

12. **Lioderma minutum.**

Hololepta minuta, Er. in Klug's Jahrb. der Ins. 1834, p. 96 [1].
Leionota minuta, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 217, t. 5. fig. 14 [2].
Lioderma minuta, Mars. loc. cit. 1857, Cat. p. 470.
Lioderma minorata, Mars. loc. cit. 1862, Cat. p. 704.

Hab. Panama, Bugaba (*Champion*).—Brazil [1 2].
One example.

APOBLETES.

Macrosternus, Marseul, Monogr. in Ann. Soc. Ent. Fr. 1853, p. 239 (pars).
Apobletes, Marseul, loc. cit. 1860, p. 852.

This genus is closely allied to *Platysoma* of authors, but differs in being much flatter and in having a broader prosternum. The species are subcortical in their habits, and

are fairly distributed in the tropics, the larger number coming from the eastern archipelago. About thirty-three species have been described, but only one has as yet been detected in Central America.

1. **Apobletes connectens,** sp. n. (Tab. IV. fig. 21.)

Oblongo-parallelus, planatus, brunneus, nitidus; antennis pedibusque rufis; fronte sparsim punctulata, utrinque marginata, ante oculos angulata; pronoto punctis aliquot sparsis lateribus, stria marginali pone oculos interrupta; elytris stria humerali apice abbreviata, striis 1^{a}–4^{m} integris, 5^{a} et suturali in medio abbreviatis, anticis coeuntibus; propygidio pygidioque sparse punctatis; prosterno lato, plano, utrinque marginato, basi parum sinuato; mesosterno transverso, antice bisinuato; tibiis anticis 4-, mediis 3-denticulatis, posticis apice spinosis. Long. $2\frac{1}{4}$–$2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Three examples. This species is doubtless very similar to the South-American *A. ridens* and *A. subridens*, Mars., which are only known to us from description; but the elytra having a long humeral stria (which gives *A. connectens* the appearance of having seven striæ) and the fifth and sutural striæ being confluent anteriorly are sufficient to separate it.

PLATYSOMA.

Platysoma, Leach, Zool. Miscell. iii. p. 77 (1817).

Over 130 species of this genus have been described, the larger proportion of which inhabit the tropical parts of the Old World; several, however, are found in North America. The two species in the present series are cylindrical in shape. They are probably all insectivorous, and are found under the bark of dead or dying trees. Some species are attached to pine-trees. Recently a species with a broad yellow band across the elytra has been found in Burmah.

1. **Platysoma columellare,** sp. n. (Tab. IV. figg. 22, 23.)

Oblongum, cylindricum, nigrum, nitidum, punctulatum; fronte concava, stria integra, subrecta; pronoto grosse et minute punctato, stria laterali valida integra; elytris basi elevatis, punctato-striatis, striis validis, integris; propygidio pygidioque ocellato-punctatis; mesosterno marginato, metasternoque grosse punctatis; tibiis anticis 4-, posticis 3-denticulatis. Long. 3 millim.

Hab. GUATEMALA, San Gerónimo, San Joaquin, Balheu (*Champion*).

The sculpture of this species agrees generally with that of *P. cylindroides*, but it is well marked and much coarser throughout. The punctures are deeper and larger; the base of the elytra is elevated, as well as the humeral angles, and the striæ are deeper and broader and clearly punctate; and the propygidium and pygidium have well-defined ocellated punctures. The greatest difference is, however, beneath, in the thickly and coarsely punctate meso- and metasternal plates.

Many examples, all of which were found beneath the bark of pines.

2. **Platysoma cylindroides.**

Platysoma cylindroides, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 280, t. 7. fig. 23[1].

Hab. Mexico[1], San Andres (*Sallé*), Jalapa (*Höge*).

PHELISTER.

Phelister, Marseul, Monogr. in Ann. Soc. Ent. Fr. 1853, p. 462.

Only about sixty species of *Phelister* have been noticed as yet by authors, but it is evident from the number of forms unnamed in collections that the genus is a large one. Some of the species assigned to it, viz. *P. lunaticus* and *P. celebius*, Mars., from the Eastern Archipelago, and *P. impressifrons* (Sol.), from Chili, have, as Herr Schmidt has noticed, an emarginate mesosternum, and these would, therefore, be better placed in *Platysoma*. The majority of the known forms are from the tropical and subtropical parts of America; some appear to be found under loose bark, others in dung, decaying vegetable matter, &c.

1. **Phelister godmani,** sp. n. (Tab. V. fig. 1.)

Ovalis, depressiusculus, supra fulgidus, subtus niger, nitidus; fronte concava, sparse et grosse punctata, stria semicirculari antice interrupta; pronoto purpureo-aurato, circum punctato, stria haud interrupta; elytris viridi-cyaneis, apice punctatis, striis dorsalibus 1 –4^{m} integris, 5^{a} subintegra, suturali ultra medium abbreviata; propygidio pygidioque punctatis; prosterno bistriato; mesosterno bisinuato, marginato, stria postice utrinque abbreviata. Long. $2\frac{1}{4}$ millim.

Hab. Panama, Bugaba 1000 feet (*Champion*).

One specimen. In its brilliant colouring this insect is similar to *P. dives*, Mars., from Rio Janeiro. *P. dives* is, however, a convex species, and has no fifth dorsal stria. *P. riehli*, Mars., from Cuba, is also closely allied to *P. godmani*, but the fifth and sutural striæ are wanting in that species.

2. **Phelister eximius,** sp. n. (Tab. V. fig. 3.)

Breviter ovalis, parum convexus, supra viridi-cyaneus, subtus niger, nitidus; fronte parce punctata, stria valida, integra, antice subarcuata; pronoto lateribus elevatis, utrinque punctato; elytris postice punctatis, striis abbreviatis, dorsalibus 3 primis antice integris, 4 basali, suturali antice abbreviata; propygidio parce, pygidioque tenuiter, punctatis; prosterno vix lato, bistriato, antice marginato; mesosterno stria marginali subintegra, transversa, sed leviter impressa. Long. 3 millim.

Hab. Nicaragua, Chontales (*Janson*).

A single example. This fine species is much larger than *P. violaceus*, Mars., and differs from it in the dorsal striæ, and, more especially, in the posterior transverse stria of the mesosternum, this stria being lightly impressed, nearly straight, and not crenulate. In *P. violaceus* the last-named stria is arched, crenulate, and finely cut.

3. **Phelister violaceus.**

Phelister violaceus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 469, t. 14. fig. 2 [1].
Phelister violaris, Mars. loc. cit. 1857, Cat. p. 475.

Hab. GUATEMALA, San Gerónimo (*Champion*).—COLOMBIA [1], Cartagena.

Four specimens.

4. **Phelister crenatus,** sp. n. (Tab. V. fig. 6.)

Breviter ovalis, subconvexus, niger, nitidus; antennis pedibusque piceis; fronte parce punctulata, stria circulari ante oculos parum interrupta; pronoto parce et tenue punctato, stria marginali integra, interna crenata ad oculum hamata, subinterrupta; elytris striis quoque crenatis, 1ª–4ª integris, 5ª in medio abbreviata, puncta basali aucta, suturali tantum basi abbreviata; propygidio pygidioque parum dense ocellato-punctatis; prosterno striis antice et postice junctis; mesosterno marginato, stria postice crenata, arcuata. Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One example. This species may be placed in the list near *P. friburgicus*, Mars., to which it is similar both in the crenate elytral striæ and in the form of the striation on the pro- and metasternum. The prosternal striæ join each other anteriorly and widen out gradually to the base, enclosing an elongate triangular space.

5. **Phelister uncistrius,** sp. n. (Tab. V. fig. 5.)

Breviter ovalis, sat convexus, leviter punctulatus, niger, nitidus; fronte in medio excavata, stria utrinque elevata, antice late interrupta; pronoto lateribus punctatis, stria marginali integra, ante scutellum foveolata; elytris striis crenatis, 1ª–4ª integris, 4ª antice arcuata, 5ª apicali, suturali antice tantum abbreviata; propygidio parce punctato; pygidio punctulato; prosterno utrinque bisinuato, striis postice coeuntibus; mesosterno bisinuato, stria antice recta, transversa arcuata, crenata, approximatis. Long. 2–2¼ millim.

Hab. GUATEMALA, Zapote, Capetillo (*Champion*).

Seven examples. This small species is very similar to *P. bovinus*, Mars., from Caracas; it differs chiefly in the striæ of the mesosternum being divided only by a narrow interstice.

6. **Phelister quadri-punctulus.**

Phelister quadri-punctulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 471, t. 14. fig. 4 [1].

Hab. NICARAGUA, Chontales (*Janson*).—VENEZUELA, Caracas [1].

One immature example.

7. **Phelister cumanensis.** (Tab. IV. figg. 24, 25.)

Phelister cumanensis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 470, t. 14. fig. 3 [1].

Hab. GUATEMALA, Cubilguitz in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*). —VENEZUELA, Cumana [1].

The mesosternal striæ of this species, as specific characters, are worthy of note.

8. Phelister affinis.

Phelister affinis, Lec. Proc. Ac. Phil. 1859, p. 311[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 174[2].

Phelister solator, Mars. loc. cit. p. 164, t. 4. no. xv. fig. 8[3] [=*affinis* (Lec.), Mars. Ann. Soc. Ent. Belg. xiii. p. 80].

Hab. MEXICO[1 2 3], Cordova (*Sallé*); GUATEMALA, near the city, Capetillo, San Gerónimo (*Champion*).

9. Phelister canalis, sp. n.

Breviter ovalis, convexiusculus, tenuissime punctulatus, niger, nitidus; fronte parum impressa, punctata, stria elevata antice modice interrupta; pronoto stria marginali integra, lateribus punctato, ante scutellum foveolato; elytris 4 vel 5 punctis basalibus auctis striis parum crenatis, 1ª–3ª integris, 4ª dimidiata, 5ª brevi, suturali ante medium abbreviata; propygidio sat grosse et parce punctato; pygidio parum dense punctulato; prosterno bisinuato, haud striato; mesosterno subsinuato, stria marginali integra, transversa arcuata, approximatis. Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, La Tinta in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA (*coll. Lewis*), Bugaba (*Champion*).

This species resembles *P. quadri-punctulus*, Mars., and has the dorsal striæ of the elytra similar; the chief differences lie in the prosternum having its whole length on the same plane, and in the mesosternal transverse stria being arcuate. One specimen, from La Tinta, has, however, two very rudimentary mesosternal striæ, so that this character may not be constant. In *P. quadri-punctulus* the lobe of the prosternum is bent downwards.

10. Phelister rouzeti.

Paromalus rouzeti, Fairm. Ann. Soc. Ent. Fr. 1849, p. 421[1].

Phelister rouzeti, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 488, t. 14. fig. 20; Jacq.-Duv. Gen. Col. Europ. ii. p. 102, t. 30. fig. 148.

Hab. MEXICO, Guanajuato, Vera Cruz (*Sallé*), Tehuacan, Aguas Calientes city (*Höge*); GUATEMALA, near the city, Dueñas, Zapote, San Joaquin, Cerro Zunil (*Champion*).

This species is abundant in some parts of Mexico and Guatemala. It was originally recorded[1] as having been found in an ant's nest near Paris, but this is no doubt an error; *P. rouzeti* cannot be regarded as European.

Under sappy bark in the vicinity of the city of Guatemala, common (*Champion*).

11. Phelister teapensis.

Phelister teapensis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 482, t. 14. fig. 14[1].

Hab. MEXICO, Teapa (*Pilate*[1]).

P. teapensis is wanting in this collection.

12. **Phelister pulvis.**

Phelister pulvis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 173, t. 4. no. xv. fig. 16 [1].

Hab. Mexico, Cordova (*Sallé* [1]).—Brazil (*Sahlberg*).

Type in this collection.

13. **Phelister carinatus,** sp. n. (Tab. V. fig. 4.)

Ovalis, convexiusculus, brunneus, nitidus; fronte transversa, lævi, stria elevata, antice subrecta, ante oculos angulata; pronoto tenuiter punctulato, lateribus anguste dilatatis, basi arcuato, angulis antice prominulis, margine angustissimo laterali elevato; elytris undique punctulatis, striis 1ª integra, carinata, 2ª utrinque abbreviata, 3ª apice abbreviata, 4ª integra, antice late arcuata; pygidio punctulato; propygidio parce et grosse subocellato-punctato; prosterno anguste carinato, striis, antice minime diversis, in medio approximatis, postice triangulariter divaricatis; mesosterno marginato, angulis utrinque prominulis, stria transversa arcuata. Long. 2 millim.

Hab. Guatemala, Cerro Zunil 5000 feet (*Champion*).

One example. This species is very dissimilar to any other yet known, but may follow *P. pulvis* in the list. Below the arched transverse stria on the mesosternum is a second very fine stria in the form of an inverted arch; the latter may indicate the suture between the meso- and metasternum, but this is not certain. The first segment of the abdomen has a very well-marked stria on each side, but these striæ terminate widely apart at the anterior as well as at the posterior suture.

14. **Phelister miramon.**

Phelister miramon, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 163, t. 4. no. xv. fig. 7 [1].

Hab. ? Mexico (*Sallé*); Guatemala (*Sallé*).

The locality given by Marseul [1] is Mexico, but the single example in the Sallé collection is labelled Guatemala.

15. **Phelister parvulus.**

Hister parvulus, Er. in Klug's Jahrb. der Ins. 1834, p. 156 [1].

Phelister parvulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 486, t. 14. fig. 18 [2].

Hab. Guatemala, Zapote (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet, La Caldera (*Champion*).—Colombia [1 2].

16. **Phelister panamensis.** (Tab. V. fig. 2.)

Phelister panamensis, Lec. Proc. Ac. Phil. 1859, p. 311 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 174 [2].

Phelister panamæ, Mars. loc. cit. 1862, Cat. p. 707.

Hab. Mexico, Jalapa, Cordova, Tlacotalpam (*Höge*), N. Yucatan (*Gaumer*); Guatemala, near the city (*Champion*); Nicaragua, Greytown, Chontales (*Janson*); Panama [1 2], Los Remedios (*Champion*).

This species, which is apparently abundant in the Central-American region, has been identified by comparison with an example sent by Leconte to Marseul.

Common under sappy bark in the vicinity of the city of Guatemala (*Champion*).

17. Phelister hæmorrhous.

Phelister hæmorrhous, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 476, t. 14. fig. 9[1]; Gemm. & Harold, Cat. iii. p. 761[2].

Hab. Mexico, N. Yucatan (*Gaumer*); Guatemala, near the city (*Champion*); Nicaragua, Chontales, Greytown (*Janson*); Panama, Los Remedios (*Champion*).—Venezuela[2].

Eighteen specimens, two entirely black. This insect is erroneously included in some European catalogues; Marseul[1] described the species from an example supposed to come from Italy, but this locality was considered by him to be doubtful.

Mr. Champion met with *P. hæmorrhous* not uncommonly at Los Remedios, in dung.

HOMALODES.

Omalodes, Erichson in Klug's Jahrb. der Ins. 1834, p. 114; Dejean, Cat. 3rd edit. p. 142.
Homalodes, Gemminger & Harold, Cat. iii. p. 763.

This curious genus is essentially an American one, and consists at present of about forty species, nearly all of which are from within the area of the tropics. Only one in the present series is new, and it is one in which the specific characters are not very remarkable. The islands of Cuba and San Domingo on the one side of the continent, and the Marquesas and Sandwich Islands on the other, have their peculiar species. The Pacific Islands mark the limit of the distribution of the genus westward. The different species frequent rotting masses of vegetation; according to Mr. Champion they are also fond of rotten fruits, as the banana &c.

1. Homalodes angulatus.

Hister angulatus, Fabr. Syst. Eleuth. i. p. 85[1]; ? Payk. Monogr. Hist. p. 42, t. 4. fig. 4[2].
Omalodes angulatus, Er. in Klug's Jahrb. der Ins. 1834, p. 118[3]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 508, t. 15. fig. 3[4].

Hab. Panama, Bugaba 1000 feet (*Champion*).—South America[1 2 3], Guiana[4], Brazil[4].

One example.

2. Homalodes lucidus.

Omalodes lucidus, Er. in Klug's Jahrb. der Ins. 1834, p. 120[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 509, t. 15. fig. 5[2].

Hab. Guatemala, Zapote (*Champion*).—Brazil, Bahia and Pará[1 2].

One example.

3. Homalodes brasilianus.

Omalodes brasilianus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 513, t. 15. fig. 7[1].

Hab. GUATEMALA, El Reposo 800 feet (*Champion*).—BRAZIL [1].

Three examples.

4. Homalodes monilifer.

Omalodes monilifer, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 520, t. 15. fig. 13[1].

Hab. MEXICO, Teapa (*Pilate and Chevrolat* [1]), Oaxaca (*Sallé*).

Three examples.

5. Homalodes mendax.

Omalodes mendax, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 177, t. 14. no. xviii. fig. 2[1].

Hab. GUATEMALA, Panzos (*Champion*); COSTA RICA (*coll. Deyrolle* [1]); PANAMA, Bugaba (*Champion*).

Two examples. This and the preceding species are known from all the others in the present series by the elytral striæ being composed of punctures, with regular intervals between them.

6. Homalodes grossus.

Omalodes grossus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 522, t. 15. fig. 15[1].

Hab. MEXICO [1], Catemaco, Playa Vicente, Cordova (*Sallé*), Matamoros Izucar, Jalapa (*Höge*), N. Yucatan (*Gaumer*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA (*Sallé*), San Juan in Vera Paz, San Gerónimo, Pantaleon, El Reposo, San Isidro (*Champion*); COSTA RICA (*Van Patten*); PANAMA, Bugaba (*Champion*).

7. Homalodes vapulo.

Omalodes vapulo, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 178, t. 14. no. xviii. fig. 3[1].

Hab. MEXICO (*Sallé* [1]).

Not in this collection.

8. Homalodes gagatinus.

Omalodes gagatinus, Er. in Archiv für Naturg. 1847, i. p. 90[1].

Hab. MEXICO, Matamoros in Puebla (*Höge*).—PERU [1].

Erichson's description [1] is insufficient for the identification of this species, but the specimens in this collection agree precisely with one which has been compared with Erichson's type in Berlin by Herr A. J. Schmidt. The insect is not noticed by Marseul. Four examples were captured by Herr Höge in Mexico in 1887.

9. **Homalodes sobrinus.**

Omalodes sobrinus, Er. in Klug's Jahrb. der Ins. 1834, p. 122[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 534, t. 16. fig. 27[2].

Omalodes mexicanus, Dej. Cat. 3rd edit. p. 142[3].

Hab. MEXICO[1 2 3], Putla, Toxpam, Cordova, Cuernavaca, Oaxaca (*Sallé*), Jalapa (*Höge*); GUATEMALA, El Reposo, Las Mercedes, San Isidro, Sinanja (*Champion*); NICARAGUA, Chontales (*Janson*); COSTA RICA (*Van Patten*); PANAMA, near the city (*J. J. Walker*).—COLOMBIA, Bogota[2]; VENEZUELA, Caracas[2]; BOLIVIA[2].

10. **Homalodes soulouquii.**

Omalodes lævigatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 530, t. 16. fig. 23[1] (nomen præocc.).

Omalodes soulouquii, Mars. loc. cit. 1861, p. 184.

Hab. MEXICO, Tehuantepec (*Höge*); GUATEMALA, Coatepeque (*Champion*); NICARAGUA (*Janson*, *Belt*); COSTA RICA (*Van Patten*, *Rogers*).—SAN DOMINGO[1].

11. **Homalodes rotundatus.**

Omalodes rotundatus, Lec. Proc. Ac. Phil. 1859, p. 311[1].

Omalodes rotundiceps, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, Cat. p. 707.

Hab. MEXICO[1].

The thorax of this species is impunctate, and each elytron has a sutural stria, which is described as "basali parva brevi." From the description the species has no very striking characteristic, and it would be satisfactory if a careful examination of the type could be made.

12. **Homalodes clavulus,** sp. n. (Tab. V. fig. 7.)

Rotundatus, subconvexus, niger, nitidus; fronte punctulata, in medio subfoveolata, stria circulari antice interrupta; pronoto lateribus parum dense punctulatis, stria ante basin terminata; elytris striis 1ª subintegra, 2ª utrinque abbreviata, 3ª brevi, subhumerali humerum jungente; propygidio pygidioque leviter et parce punctatis; prosterno antice dense, postice leviter, punctato; mesosterno modice sinuato, stria antice late interrupta; tibiis anticis 4-dentatis. Long. 5½–6 millim.

Hab. GUATEMALA, El Reposo 800 feet, San Isidro 1600 feet, San Juan in Vera Paz (*Champion*).

Eight specimens. This is the smallest species of *Homalodes* yet recorded, its nearest allies being *H. soulouquii* and *H. sobrinus*; from both of these it is easily known by the punctuation of the head and thorax, by the sinuosity in the mesosternum being less deep, and, above all, by the thoracic stria terminating before the base, and the marginal interstice being extremely narrow.

CONTIPUS.

Contipus, Marseul, Monogr. in Ann. Soc. Ent. Fr. 1853, p. 543.
Contopus, Gemminger & Harold, Cat. iii. p. 764 (nomen præocc.).

Four species of this genus are known—two from America and two from the West Coast of Africa. From the number of specimens in collections we may conclude the species are either rare or difficult to procure, and nothing is apparently known of their habits. The genus has the general facies of *Hister*.

1. Contipus subquadratus.

Contipus subquadratus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1853, p. 548, t. 16. fig. 3 [1].

Hab. Mexico, Guanajuato, Puebla (*Sallé*), Matamoros Izucar (*Höge*), Yucatan (*Pilate* [1]). Three examples.

HISTER.

Hister, Linnæus, Syst. Nat. 12th edit. ii. p. 566 (1767).
Atholus, Thomson, Skand. Col. i. p. 767 (1859), & iv. p. 228.
Pactolinus, Motschulsky, Bull. Acad. Imp. St. Pétersb. i. p. 305 (1860).

Over 300 species are known of this genus, and, setting aside Australia, they seem to be fairly distributed over the globe. The African forms are probably as little known as any. The American species, which include *H. diadema*, *H. coronatus*, and *H. monotivagus* of this series, are some of the most curious and interesting. *Hister* is not a genus which is likely at any time to be subdivided by systematists, although the species are very dissimilar *inter se* and their characters well marked. Several parts of the globe have a series of similar species which possess distinctive characters of their own, and this is especially the case in Tropical America.

1. Hister costatus.

Hister costatus (Lec.), Mars. Monogr. in Ann. Soc. Ent. Fr. 1857, p. 407, t. 10. no. xx. fig. 1 [1].

Hab. Mexico (*Flohr*), Tenejapam, Guanajuato, Puebla (*Sallé* [1]), Matamoros Izucar, Jalapa, Guadalajara (*Höge*).

In the Sallé collection there is an example labelled as from Guatemala, but this locality requires confirmation. Herr Höge met with this species in abundance during his second expedition to Mexico; it is sometimes found in ants' nests.

2. Hister lævipes.

Hister lævipes, Germ. Ins. Spec. nov. p. 87; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 233, t. 7. fig. 49 [1].
Hister simplicimanus, Dej. Cat. 3rd edit. p. 141 [2].

Hab. North America [2], United States [1].—Mexico [1].—Brazil [1].

There is no example of this species in the collection under examination.

3. **Hister ciliatus,** sp. n. (Tab. V. fig. 8.)

Ovalis, convexus, niger, nitidus ; fronte plana, stria antice recta ; pronoto lateribus ciliato, stria laterali externa dimidiata, interna integra, postice margini approximata ; elytris fossa marginali bisulcato, striis 1ª–4ª integris, 5ª apicali, suturali dimidiata ; propygidio pygidioque parce punctatis ; prosterno tenuiter punctulato, haud striato ; mesosterno sinuato, stria integra ; tibiis anticis subdentatis, posticis multispinosis. Long. 4½–5 millim.

Hab. Mexico, Guanajuato (*Sallé*).

Four examples. This insect has the facies of *H. lævipes*, Mars., and like it has the fore tibiæ triangularly dilated with obsolete teeth. The sides of the thorax are ciliate beneath, as in the European *H. major*, Linn.

4. **Hister impressifrons.**

Hister impressifrons, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 266, t. 8. fig. 68 [1] ; Dej. Cat. 3rd edit. p. 141 [2].

Hister cavifrons, Sturm, Cat. 1843, p. 95 [3] (nec Mars.).

Hab. Nicaragua, Chontales (*Janson*) ; Panama, Bugaba (*Champion*).—Colombia [3] ; Guiana, Cayenne [1 2].

5. **Hister cavifrons.**

Hister cavifrons, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 267, t. 8. fig. 69 [1].

Hab. North America, United States [1].—Mexico, Toxpam, Cordova, Vera Cruz, Parada (*Sallé*), Oaxaca, Jalapa (*Höge*) ; Guatemala, El Reposo, Las Mercedes, Cerro Zunil, Pantaleon, Mirandilla, Zapote, Balheu, Cubilguitz, Sabo, Chacoj, Tamahu, Teleman (*Champion*) ; Panama, Bugaba, Volcan de Chiriqui, David, San Feliz (*Champion*).—Venezuela [1].

An abundant species in Mexico and southwards into Venezuela.

6. **Hister granadensis.**

Hister granadensis, Lec. Proc. Ac. Phil. 1859, p. 312 [1].

Hister granadius, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, Cat. p. 711.

Hab. Panama [1].

This species is unknown to us.

7. **Hister cœnosus.**

Hister cœnosus, Er. in Klug's Jahrb. der Ins. 1834, p. 140 [1] ; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 276, t. 8. fig. 76 [2].

Hister decisus, Lec. Monogr. in Boston Journ. Nat. Hist. v. p. 21, t. 2. fig. 10 [3].

Hister repletus, Lec. loc. cit. p. 19, t. 2. fig. 6 [4].

Hab. North America, United States [2 3 4].—Mexico, Cordova, Cuernavaca, Guanajuato (*Sallé*), Durango city, Chilpancingo, Zacualtipan, Lagos in Aguas Calientes, Jalapa,

Oaxaca, Acapulco (*Höge*); GUATEMALA[2] (*Sallé*), Quezaltenango, Cerro Zunil, El Reposo, Capetillo, Zapote, San Gerónimo, Balheu, Cubilguitz, Sabo, Tamahu, Teleman, San Juan in Vera Paz (*Champion*); NICARAGUA[2], Granada (*Sallé*), Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui, San Feliz (*Champion*).—ANTILLES, Cuba[1 2], San Domingo[2].

Dr. Horn (Proc. Am. Phil. Soc. xiii. p. 288) states that *H. repletus*, Lec., is synonymous with this species, which is very abundant throughout the Central-American region.

8. Hister brunnipes.

Hister brunnipes, Er. in Klug's Jahrb. der Ins. 1834, p. 141[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 277, t. 8. fig. 77[2].

Hab. MEXICO[1 2].

In the collection before us there is no example which can be assigned to this species. It is described as being very closely allied to *H. cœnosus*. Marseul says that the mesosternum is emarginate, and the internal thoracic stria is not parallel to the margin but deviates outwardly towards the base. The example in Berlin, which is supposed to be Erichson's type, is, according to Herr Joh. Schmidt, who by request has lately examined it, a specimen of *H. cœnosus*.

9. Hister panamensis.

Hister panamensis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 234, t. 7. fig. 50[1].

Hab. MEXICO, Jalapa (*Höge*), Yucatan[1] (*Gaumer*); GUATEMALA, San Gerónimo, Capetillo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA[1], Volcan de Chiriqui (*Champion*).

H. panamensis is said to differ from *H. cœnosus*, Er., in the subhumeral stria of the elytra being without an appendicle; and it is doubtful whether it is anything more than a variety of that species.

10. Hister areolifer.

Hister areolifer, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 526, t. 13. fig. 17[1].

Hab. MEXICO[1], Hacienda de Bleados (*Dr. Palmer*), Ciudad in Durango, Durango city, Tula in Hidalgo, Cholula in Puebla, Jalapa, Oaxaca (*Höge*), Guanajuato (*Sallé*).

11. Hister dubius.

Hister dubius, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 279, t. 8. fig. 79[1].

Hab. GUATEMALA, Teleman in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*). —SOUTH AMERICA, Brazil[1], Monte Video[1].

Three examples.

12. **Hister sexstriatis.**

Hister sexstriatus, Lec. Ann. Lyc. N. York, v. p. 163 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 290, t. 8. fig. 86 [2].

Hab. North America, California [1 2].—Mexico, Oaxaca (*Höge*). Four examples.

13. **Hister pioti.** (Tab. V. fig. 9.)

Hister pioti, Mars. Ann. Soc. Ent. Belg. xiii. p. 88 (1870) [1].

Hab. Guatemala, Quiche Mountains 9000 feet (*Champion*).—Amazons [1].

An example found by Mr. Champion in Guatemala is referable to this species.

14. **Hister litus.**

Hister litus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 541, t. 13. fig. 31[1].

Hab. Mexico [1], Jalapa (*Höge*).

15. **Hister punctiventer.**

Hister punctiventer, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 543, t. 9. fig. 114[1].

Hab. Mexico (*Laferté* [1]), Puebla (*Sallé*), Durango city, Tula, Jalapa (*Höge*).

16. **Hister truncatisternum,** sp. n. (Tab. V. fig. 14.)

Ovalis, convexiusculus, niger, nitidus; fronte punctulata, stria integra antice subrecta; pronoto tenuissime punctulato, stria interna crenulata, integra, externa interrupta; elytris striis 1ª–3ª integris validis, 4ª basali, 5ª nulla, suturali abbreviata; propygidio pygidioque parce punctatis; prosterno parum lato, punctulato, haud striato; mesosterno marginato, antice recto, stria crenulata integra. Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. Mexico, Chihuahua city and Santa Clara (*Höge*).

This *Hister* belongs to the same group as *H. incertus*, Mars., and resembles *H. rectisternus*, Mars., in the anterior outline of the mesosternum. The line which indicates the suture between the meso- and metasternum is minutely angulate in the middle, as though the mesosternum was acutely produced. In the eight examples under examination, four have the outer thoracic striæ not shortened, and four have them at the anterior angle only. The fourth stria of the elytra is also sometimes obliterated.

17. **Hister californicus.**

Hister californicus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 544, t. 9. fig. 115[1].

Hab. North America, California [1].—Mexico, Ciudad in Durango (*Forrer*), Jalapa (*Höge*), Parada, Toluca, Guanajuato (*Sallé*).

18. **Hister lucanus.**

Hister lucanus, Horn, Proc. Am. Phil. Soc. xiii. p. 283 (1873)[1].

Hab. North America, Lower California [1].—Mexico (*Flohr*).

19. **Hister biplagiatus.**

Hister biplagiatus, Lec. Monogr. in Bost. Journ. Nat. Hist. v. p. 25, t. 3. fig. 4[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 552, t. 9. fig. 119[2]; Dej. Cat. 3rd edit. p. 141[3].

Hister binotatus, Latr. in litt.

Hister instratus, Lec. Col. Kans. 1859, p. 7[4].

Hab. NORTH AMERICA[3], United States [1 2 4].—MEXICO, Durango city (*Höge*).

Two examples, captured in 1887.

20. **Hister patagiatus,** sp. n. (Tab. V. fig. 13.)

Oblongo-ovatus, convexus, niger, nitidus, subtus lateribus villosis; antennis piceis; fronte parce punctulata, stria semicirculari antice subinterrupta; pronoto stria interna ad oculos interrupta, externa brevissima; elytris nigris, macula flavo-rubra arcuata, striis 1–3[m] dorsalibus integris, 4[a] et 5[a] ad apicem vix breviter notatis; propygidio ocellato-punctato; pygidio dense sat grosse punctato; prosterno lobo brevi, parce punctato; mesosterno stria antice parum interrupta; tibiis anticis dilatatis, 4-dentatis, posticis multispinosis. Long. $4\frac{1}{4}$ millim.

Hab. MEXICO, Acapulco (*Höge*).

One example. This small insect pertains to the American section of the group to which *H. sellatus*, Lec., and *H. lucanus*, Horn, belong. Its specific differences lie chiefly in the thoracic and mesosternal striæ and in the ocellated punctures of the propygidium. The trapezoidal black spot on the elytra common to it and its congeners is so large that it reduces the arcuate, red or yellow, band to marginal limits.

21. **Hister coronatus.**

Hister coronatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 545, t. 13. fig. 35[1].

Hab. MEXICO, Cordova (*Sallé* [1]); PANAMA, Caldera in Chiriqui 1200 feet (*Champion*).

Two examples from Cordova and one from the State of Panama.

22. **Hister politus,** sp. n.

Ovalis, convexus, niger, nitidus, politus; fronte impressa, subtiliter punctata, stria integra utrinque sinuata; pronoto undique subtilissime punctulato, stria interna integra, externa dimidiata; elytris striis 1[a]–3[m] integris, 4[a] basi rudimenta, 5[a] brevissima arcuata, suturali utrinque abbreviata; propygidio basi parce punctato; pygidio lævi; prosterno haud striato; mesosterno leviter emarginato, stria integra; tibiis anticis obtuse tridentatis, posticis multispinosis. Long. 6–$6\frac{1}{2}$ millim.

Hab. MEXICO, Temax in N. Yucatan (*Gaumer*).

This species is very similar to *H. coronatus*, Mars. It differs in the minute punctuation of the head and thorax, the more transverse and but slightly bent frontal stria, and the much longer outer thoracic stria; the third elytral stria is usually complete, although in some specimens it is broken up into punctures at the apex. The chief distinction, however, lies in the pygidium, it being almost smooth though sometimes there are a few punctures at the basal angles; in *H. coronatus* the pygidium is thickly

covered with ocellated punctures and also has two large lobes or bosses on either side of it. The species is a conspicuous addition to the Central-American fauna. Numerous examples were obtained.

23. **Hister diadema.**

Hister diadema, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 559, t. 9. fig. 124[1].

Hab. Panama, Volcan de Chiriqui (*Champion*).—Guiana[1]; Bolivia[1]. Three examples.

24. **Hister bullatus,** sp. n. (Tab. V. fig. 10.)

Suborbicularis, convexiusculus, niger, nitidus; antennis clava rufa; fronte impressa, stria valida angulosa, integra; pronoto stria interna integra punctato-striata, externa brevi; elytris punctato-striatis, striis 1ª–3ª validis integris, 4ª in medio late interrupta, 5ª apice appendiculata, suturali brevi media; prosterno bistriato; mesosterno modice sinuato, stria integra, haud marginato; propygidio utrinque impresso pygidio bilobo, grosse et profunde punctatis; tibiis anticis subdentatis, posticis spinosis. Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

One example. This and the following two species are closely allied to *H. coronatus*, Mars., but their size and system of striation on the thorax and elytra will easily distinguish them. The section to which the three species belong is remarkable on account of the large and deep punctuation of the exposed abdominal segments. From the few specimens captured all seem to be rare or difficult to procure.

25. **Hister nodatus,** sp. n. (Tab. V. fig. 11.)

Suborbicularis, convexiusculus, niger, nitidus; fronte subimpressa, stria integra, antice recta, utrinque sinuata; pronoto stria interna integra, externa parum abbreviata; elytris striis 1ª–4ª integris, 5ª brevi, suturali utrinque abbreviata; prosterno bistriato, striis antice et postice junctis; propygidio basi lævi, utrinque impresso, transversim grosse punctato; pygidio bilobo et profunde punctato. Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba 1000 feet (*Champion*).

The length of the external stria on the thorax separates this species from *H. bullatus* and *H. montivagus*. In the present collection there is a second specimen from Chacoj, Guatemala (*Champion*), which is perhaps a variety of this species; it differs from the other in the external thoracic stria being more abbreviated, and in the absence of the curious lobe-like excrescences on the pygidium: I name it, provisionally, *obliteratus*.

26. **Hister montivagus,** sp. n. (Tab. V. fig. 12.)

Suborbicularis, convexiusculus, niger, nitidus; fronte plana, stria valida antice recta; pronoto stria externa integra, pone oculos sinuata, externa brevi; elytris striis 1ª–3ª integris, 4ª in medio late interrupta, 5ª apice appendiculata, suturali brevi media; prosterno bistriato, postice junctis; mesosterno sinuato, stria integra; propygidio utrinque impresso pygidioque grosse et profunde punctatis. Long. $3\frac{1}{2}$–$4\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Three examples. The elytral striæ in this species agree with those of *H. bullatus*; the specific differences lie chiefly in the frontal and prosternal striæ, and in *H. montivagus* being without the bilobed elevations on the pygidium.

27. **Hister servus.**

Hister servus, Er. in Klug's Jahrb. der Ins. 1834, p. 147 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 561, t. 9. fig. 126 [2].

Hab. MEXICO, Playa Vicente, Tuxtla (*Sallé*), Esperanza, Oaxaca, Tula in Hidalgo, Jalapa (*Höge*); GUATEMALA, Chacoj in Vera Paz (*Champion*); PANAMA, Taboga Isl. (*Champion*).—ANTILLES, Cuba [1] [2], San Domingo [2].

Some of the examples in this collection differ from the type in being larger, the propygidium with a larger grade of punctures, and the outer thoracic stria varying in length, being either short or complete. One of the series from Tula has no sutural stria to the elytra; the name of *comes* is provisionally given to it, as it seems almost certain that it is distinct from *H. servus*, Er.

28. **Hister castaneus.**

Hister castaneus, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xv. p. 465 [1].

Hab. NICARAGUA, Chontales (*Belt* [1]).—COLOMBIA, Santa Marta.

I have seen a nearly black example of this species from Santa Marta, so that it seems probable that the specimens captured by Mr. Belt are immature. *H. castaneus* is easily known from *H. servus*, Mars., by the finer and more sparse punctuation of the propygidium and pygidium.

29. **Hister criticus.**

Hister criticus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 551, t. 14. fig. 41 [1].

Hab. MEXICO [1], Cordova (*Sallé*, *Höge*), Cholula in Puebla (*Höge*).

EPIERUS.

Epierus, Erichson in Klug's Jahrb. der Ins. 1834, p. 158.

About sixty species of this genus have been described; three are recorded from Southern Europe and a few from Asia, but by far the greater number are from the New World, more especially from within the tropics. Some of its members possess remarkable sexual characters, such as tubercles on the head and excrescences on the thorax, but in the majority of the known forms these qualities are wanting. The species are found beneath the bark of trees.

1. **Epierus frontalis.** (Tab. V. figg. 15; 15 *a*, profile.)

Epierus frontalis, Kirsch, Berl. ent. Zeitschr. 1866, p. 173 [1]; Mars. Ann. Soc. Ent. Belg. xiii. 1870, p. 91 [2].

Hab. GUATEMALA, Tamahu and Cubilguitz in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*).—COLOMBIA, Bogota [1] [2].

Seven examples. The female of this species has no frontal tubercle.

2. **Epierus trux.**

Epierus trux, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 555 [1], and 1862, t. 4. no. xxiii. fig. 1.

Hab. Mexico [1], Cordova (*Sallé* [1]), Almolonga (*Höge*).

3. **Epierus incas.**

Epierus incas, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 681, t. 10. fig. 2 [1].

Hab. Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).—Venezuela, Caracas [1]. Six examples.

4. **Epierus lucens.**

Epierus lucens, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 689, t. 10. fig. 10 [1].

Hab. Mexico, Las Vigas (*Höge*); Guatemala, San Juan in Vera Paz (*Champion*); Nicaragua, Granada (*Sallé*); Panama, Bugaba (*Champion*).—Venezuela, Caracas [1].

Six examples.

5. **Epierus patruelis,** sp. n. (Tab. V. fig. 16.)

Breviter ovalis, convexus, niger, nitidus; antennis clava rufa; pedibus obscuro-brunneis; fronte convexa, punctulata, clypeo concavo; pronoto sat dense punctulato, ante scutellum obscure foveolato, stria marginali integra; elytris undique punctulatis, striis haud abbreviatis; propygidio pygidioque punctulatis; prosterno parum dense punctato, bistriato, striis parallelis; mesosterno stria marginali late interrupta, transversa arcuata, valide impressa; tibiis anticis multi-spinosis. Long. 3 millim.

Hab. Guatemala, Capetillo (*Champion*).

Four examples. Very similar to *E. caviscutus*, Mars., but distinguished from it by the elytral striæ being complete and the prosternum punctulate, and by the very deep transverse stria across the mesosternum.

6. **Epierus caviscutus.**

Epierus caviscutus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 558 [1], and 1862, t. 4, no. xxiii. fig. 4.

Hab. Mexico, Cordova (*Sallé* [1]), Jalapa (*Höge*); Guatemala, Senahu in Vera Paz, Capetillo (*Champion*).

7. **Epierus frater.**

Epierus frater, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 690, t. 10. fig. 11 [1].

Hab. Mexico, Teapa and Opelouzas (*Pilate* [1]), Cordova, Guanajuato (*Sallé*).

Five examples.

8. **Epierus intermedius.**

Epierus intermedius, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 691, t. 10. fig. 12 [1].

Hab. Mexico, Cordova (*Sallé*); Guatemala [1] (*Sallé*), Chacoj, San Juan, and San Gerónimo in Vera Paz (*Champion*).

9. **Epierus lucidulus.**

Epierus lucidulus, Er. in Klug's Jahrb. der. Ins. 1834, p. 161[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 695, t. 10. fig. 16[2].

Dendrophilus ellipticus, Dej. Cat. 3rd edit. p. 143[3].

Dendrophilus similis, Dej. Cat. loc. cit.[4]

Hab. MEXICO, Villa Lerdo in Durango, Tapachula in Chiapas (*Höge*), Cordova (*Sallé*), Yucatan[2] (*Gaumer*); BRITISH HONDURAS, R. Sarstoon, Belize (*Blancaneaux*); GUATEMALA, Panzos, Teleman, Chacoj, Cahabon, Zapote (*Champion*); NICARAGUA[2], Chontales (*Janson*); PANAMA, Tolé (*Champion*).—COLOMBIA[1 2 3 4]; VENEZUELA[2]; BRAZIL[1 2].

10. **Epierus axillaris.**

Epierus axillaris, Mars. Ann. Soc. Ent. Belg. xiii. p. 91[1] (1870).

Hab. GUATEMALA, Capetillo, Zapote (*Champion*).—GUIANA, Paramaribo[1].

Three examples.

11. **Epierus divisus.**

Epierus divisus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 562[1], and 1862, t. 4. no. xxiii. fig. 8.

Hab. MEXICO[1], Vera Cruz (*Sallé*).

One example.

12. **Epierus vagans.**

Epierus vagans, Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 563[1], and 1862, t. 4. no. xxiii. fig. 9.

? *Epierus mehicanus* (sic), Lec. Proc. Ac. Phil. 1859, p. 313[2] (=*mexicanus*, Mars. loc. cit. p. 565).

Hab. MEXICO[2], Teapa, Playa Vicente (*Sallé*[1]), Almolonga, Jalapa, Esperanza (*Höge*); NICARAGUA, Chontales (*Janson*).

E. mexicanus, Lec., is here placed as a synonym with doubt; the description of it agrees with *E. vagans*, Mars., in every detail, except in the punctuation of the pygidium. Marseul says of *E. vagans* that the propygidium and pygidium are "couverts l'un et l'autre de points assez forts, épars;" and Leconte states that the pygidium of *E. mexicanus* is "densely punctured." In the large series of *E. vagans* now under examination the punctuation of the pygidium is usually more dense than that of the propygidium, and the distinctive character given by Leconte seems insufficient. The last-named author says nothing of the under surface of the insect; and if an examination of his type proves it to be conspecific with *E. vagans*, it is even then doubtful whether Leconte's name should have the priority, as his description is very indifferent.

13. **Epierus devius.**

Epierus devius, Lec. Proc. Ac. Phil. 1859, p. 314[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1861, p. 566.

Epierus devians, Mars. loc. cit. 1862, Cat. p. 712.

Hab. MEXICO [1].

This insect was unknown to Marseul when he wrote his monograph, and is not represented in this collection.

14. **Epierus planulus.**

Epierus planulus, Er. in Klug's Jahrb. der Ins. 1834, p. 162 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 702, t. 10. fig. 22 [2].

Epierus decipiens, Lec. Ann. Lyc. N. York, v. p. 164 [3] (=*planulus*, Er., sec Horn, Trans. Am. Phil. Soc. xiii. p. 301).

♂. *Epierus nasutus*, Horn, loc. cit. p. 301 [4].

Hab. NORTH AMERICA, Rio Colorado [2 3], Fort Yuma in Arizona [4].—MEXICO, Las Vigas, Toluca (*Höge*), Teapa [2]; BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Cahabon (*Champion*).—VENEZUELA, La Guayra [1], Caracas [2]; PERU.

The male of this species has a frontal tubercle.

15. **Epierus incultus.**

Epierus incultus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 703, t. 10. fig. 23 [1].

Hab. MEXICO [1], Teapa, Vera Cruz (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, San Juan in Vera Paz, Purula, San Gerónimo, El Jicaro, Zapote (*Champion*).

16. **Epierus scitus**, sp. n. (Tab. V. fig. 17.)

Ovalis, supra depressus, niger, nitidus; antennis pedibusque piceis, clava rufa; fronte plana, supra oculos elevata, stria brevissima; pronoto parce punctato, stria marginali antice late interrupta; elytris striis crenulatis, 1ª–4ᵐ integris, 5ª et suturali antice abbreviatis; propygidio pygidioque punctulatis; prosterno lato, bistriato, lævi; mesosterno antice sinuato, marginato, stria transversa sat profunde impressa. Long. 2½ millim.

Hab. GUATEMALA, Cerro Zunil, Capetillo (*Champion*).

Four specimens. This species somewhat resembles *E. incultus*, Mars.; but it is broadly oval in outline, and has two shortened elytral striæ; the prosternum is smooth and shining, with the lateral striæ nearly parallel.

17. **Epierus longulus.**

Epierus longulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 704, t. 10. fig. 24 [1].

Hab. MEXICO, Ciudad in Durango, Toluca, Las Vigas (*Höge*), San Andres, Vera Cruz (*Sallé*), Yucatan [1].

The male of this species has a distinct frontal process.

18. **Epierus fulvicornis.**

Hister fulvicornis, Fabr. Syst. Eleuth. i. p. 90[1]; Payk. Monogr. Hist. p. 45, t. 10. fig. 6[2].
Epierus fulvicornis, Er. in Klug's Jahrb. der Ins. 1834, p. 162; Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 706, t. 10. fig. 26[3].

Hab. British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Teleman, Dueñas (*Champion*).—South America [1 2], Colombia [3].

19. **Epierus antillarum.**

Epierus antillarum, Mars. Monogr. in Ann. Soc. Ent. Fr. 1854, p. 700, t. 10. fig. 21[1].

Hab. Mexico, Tehuantepec, Cordova (*Höge*).—Antilles, Cuba [1], Porto Rico [1], San Domingo [1].

Five specimens.

20. **Epierus rufulus,** sp. n. (Tab. V. fig. 18.)

Ovalis, parum convexus, rufo-brunneus, supra parce punctulatus; antennis pedibusque concoloribus; fronte antice depressa, stria tenui impressa, integra; pronoto stria marginali antice haud interrupta, laterali ad oculos cessante, ante scutellum foveolato; elytris striis dorsalibus 1ª–4ª integris validis, 5ª in medio, suturali ultra abbreviatis, arcu basali auctis, subhumerali nulla; propygidio parce punctato, pygidio sublævi; prosterno striis 2 validis, antice sensim coeuntibus; mesosterno leviter sinuato, marginato, stria transversa, sat crenulata; tibiis anticis 10-, posticis multi-spinosis. Long. $2\frac{3}{4}$ millim.

Hab. Mexico, Atlisco in Puebla (*Höge*), Guanajuato (*Sallé*).

Six examples. The peculiar colour and the form of the prosternal striæ will easily lead to the recognition of this species.

21. **Epierus dubius,** sp. n.

Oblongo-ovalis, depressiusculus, brunneus, nitidus; fronte punctulata, antice depressa, utrinque striata; pronoto angulis anticis subdilatatis, parce punctulato, tenuiter marginato, stria pone oculos crenulata, arcuatim impressa, ante scutellum aciculato-punctato; elytris striis 1ª–4ª dorsalibus integris, 5ª in medio et suturali ultra abbreviatis, interstitiis parce punctulatis; propygidio pygidioque punctatis; prosterno bistriato, striis anticis conjunctis; mesosterno transverso, late emarginato, stria marginali tenuiter impresso, in medio striato, stria transversim late arcuata; tibiis anticis 8-denticulatis, posticis 5- vel 6-spinosis. Long. $1\frac{3}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*).

This very distinct species has some of the characters of *Phelister*; but on account of the anterior edge of the mesosternum being emarginate, and not wishing to make a new genus on a unique specimen, it is provisionally placed in *Epierus*. The curious thoracic striæ behind the eyes is a character as yet unobserved in any other species of the family.

CARCINOPS.

Carcinops, Marseul, Monogr. in Ann. Soc. Ent. Fr. 1855, p. 83.
Carcinus, Marseul, Ann. Soc. Ent. Fr. 1862, p. 6 (nomen præocc.).
Xestipyge, Marseul, loc. cit. p. 6.
Kissister, Marseul, loc. cit. p. 7.

Like the last genus the species of this come chiefly from America.

Carcinops will probably require division before long, but it does not seem desirable to separate it until more material for the purpose is at hand. Marseul has suggested *Kissister* for a European species (*minima*, Aubé), and *Xestipyge* for a supposed African one (*radula*, Mars.), but these names have not yet been generally adopted.

The genus differs from *Paromalus* in having a conspicuous scutellum and elytral striæ.

1. **Carcinops multistriata,** sp. n. (Tab. V. fig. 19.)

Ovalis, parum convexa, brunnea, subnitida; fronte parce punctulata, inter oculos triangulariter impressa, supra oculos valide striata, clypeo dense et rugose punctulato; pronoto stria marginali angusta, subintegra, ante scutellum et extus punctis validis; elytris striis 1ª–4ᵐ integris, 4ª ad suturam arcuata, 5ª et 6ª antice late interruptis, interstitiis bistriatis; propygidio pygidioque punctulatis; prosterno bistriato; mesosterno profunde sinuato marginatoque; tibiis anticis 3-denticulatis, posticis spinulosis. Long. $2\frac{1}{4}$ millim.

Hab. Mexico, Guanajuato (*Sallé*), Mexico city (*Flohr*), Atlisco (*Godman*).

Five examples. This species belongs to Marseul's section *Xestipyge*; it is allied to *C. radula*, Mars., of which we have examined two examples—one labelled Cape of Good Hope and the other California; but the latter locality is more probably the correct one. In *C. radula* the prosternum is very coarsely punctured, in *C. multistriata* only obscurely so. In *C. multistriata* the metasternal plate has the marginal striæ nearly parallel and only sinuate at the base; in *C. radula* the striæ are gradually divergent, and less distinct posteriorly owing to the coarseness of the punctuation. The elytral interstices are bistriate, and these intermediate striæ are of the same length as the normal striæ; the fifth and sutural striæ are not conspicuously different to the interstitial striæ next to them. Mr. Godman has quite recently found this species, and also *Hister costatus* and *Epierus rufulus*, in ants' nests (*Œcodoma*) at Atlisco in the State of Puebla.

2. **Carcinops garbiglietti.** (Tab. V. fig. 24.)

Carcinops (*Xestipyge*) *garbiglietti*, Mars. Ann. Soc. Ent. Fr. 1867, p. 55 [1].

Hab. Mexico, Amecameca in Morelos (*Höge*).—Brazil [1].

Two examples.

3. **Carcinops punctinotum,** sp. n. (Tab. V. fig. 25.)

Ovalis, parum convexa, nigra, subnitida; fronte sparse punctulata, haud striata, antice leviter impressa; pronoto stria marginali integra, sparse punctulato, lateribus punctis grossis intermixtis, ante scutellum

foveolato; elytris striis integris, subhumerali brevi, humerali et 1ª et 2ª dorsalibus sulcatis, punctatis, 4ª–6ª leviter impressis, interstitiis distincte punctulatis; propygidio pygidioque grosse punctatis; prosterno bistriato; mesosterno marginato; tibiis anticis bidentatis. Long. $2\frac{1}{2}$ millim.

Hab. MEXICO (*coll. Schmidt*), Tula in Hidalgo (*Höge*).

Four examples. This species is of the same size and form as, and indeed closely resembles, *C. consors*, Lec.; but it may be at once recognized by the punctures on the interstices of the elytral striæ. The punctuation of the thorax and the striæ of the elytra gradually become fainter towards the middle of the dorsal region. The humeral and the first two striæ are deeply sulcate. The interstitial line between the meta- and mesosternum is distinctly crenulate.

4. **Carcinops consors.**

Paromalus consors, Lec. Ann. Lyc. N. York, v. p. 164[1].
Carcinops consors, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 88, t. 8. no. xxii. fig. 1[2].

Hab. NORTH AMERICA, San Diego in California [1 2].—MEXICO, Campeche in Yucatan [2], Acapulco in Guerrero (*Höge*).

This species is stated to occur in rotten masses of *Opuntia*. Numerous examples were captured at Acapulco by Herr Höge.

5. **Carcinops gilensis.**

Paromalus gilensis, Lec. Ann. Lyc. N. York, v. p. 164[1].

Hab. NORTH AMERICA, Gila River [1].—BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, near the city (*Champion*).

This species is one of the largest of the Central-American series, and may be known from *C. consors* by the absence of the humeral stria. There is a larger species ($2\frac{3}{4}$ millim.) closely allied to this, *C. ovatula*, Lewis, from S. Brazil, in which the elytral striæ are more complete and the mesosternal plate wider and less sinuate; but the other characters are almost identical, especially as regards the frontal striæ. These three species represent a distinct section of the genus. *C. gilensis* is recorded [1] as having been found in rotten masses of *Cereus giganteus*.

6. **Carcinops merula.**

Carcinops merula, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 10[1], and 1861, t. 15. no. xxiv. fig. 8.

Hab. MEXICO (*coll. Mniszech* [1]), Guanajuato (*Sallé*).

7. **Carcinops lanista.**

Carcinops lanista, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 11[1], and 1861, t. 15. no. xxiv. fig. 10.

Hab. MEXICO [1].

This species is not represented in the collection now under examination.

8. **Carcinops fumosa,** sp. n. (Tab. V. fig. 20.)

Ovalis, parum convexa, nigro-picea, nitida ; fronte parce punctulata, punctis grossis intermixtis, stria integra ; pronoto stria haud interrupta, undique punctulato, lateribus sparsim punctatis ; elytris apice parce punctatis, striis validis, subcrenatis, parallelis, 1ª–4ª integris, 5ª parum, suturali amplius, abbreviatis ; propygidio pygidioque parum dense subocellato-punctatis ; tibiis anticis bidentatis. Long. 2 millim.

Hab. GUATEMALA, near the city (*Champion*).

This species is very closely allied to *C. fumata*, Mars., from Brazil : in the last-named insect the mesosternal stria is "subrecta," in *C. fumosa* it is distinctly sinuate. The large punctuation of the forehead and pygidium in *C. fumosa* are also good specific differences. *C. lanista*, Mars., is much more coarsely punctured on the forehead than in this species.

9. **Carcinops tenella.**

Paromalus tenellus, Er. in Klug's Jahrb. der Ins. 1834, p. 170 [1].
Carcinops tenellus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 94, t. 8. no. xxii. fig. 7 [2], and 1862, p. 13.
Hister corticalis, Lec. Ann. Lyc. N. York, v. p. 163 [3].
Carcinops corticis, Mars. Ann. Soc. Ent. Fr. 1862, p. 712.

Hab. NORTH AMERICA, Colorado [3], Gila River [2].—MEXICO, Cordova (*Sallé*, *Höge*), Tehuantepec (*Höge*).—COLOMBIA [1], Cartagena [2] ; VENEZUELA, Caracas [2].

This insect is stated to be found in rotten masses of *Agave*.

10. **Carcinops collaris.**

Carcinops collaris, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 13 [1], and 1861, t. 15. no. xxiv. fig. 13.

Hab. MEXICO [1], Cordova (*Sallé*) ; GUATEMALA, near the city, San Lucas (*Champion*).

11. **Carcinops tantilla.**

Carcinops tantillus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 93, t. 8. no. xxii. fig. 6 [1].
Carcinops tristis, Mars. loc. cit. 1862, p. 11.

Hab. MEXICO, Cordova, Orizaba (*Sallé*), Jalapa, Oaxaca, Las Vigas (*Höge*) ; BRITISH HONDURAS, Belize, R. Hondo, R. Sarstoon (*Blancaneaux*) ; GUATEMALA, Chacoj, Cahabon (*Champion*) ; NICARAGUA, Chontales (*Janson*).—VENEZUELA, Caracas [1].

This species was first recorded from Caracas [1], but it extends northwards to Mexico, and is evidently a common and widely distributed insect.

12. **Carcinops misella.**

Carcinops misellus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 95, t. 8. no. xxii. fig. 8 [1].
Carcinops miser, Mars. loc. cit. 1862, p. 13.

Hab. MEXICO, Cordova (*Sallé*), Esperanza (*Höge*) ; BRITISH HONDURAS, Belize (*Blan-*

caneaux); GUATEMALA [1], Yzabal (*Sallé*), San Juan in Vera Paz, Tamahu, Purula, Balheu, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This species has the thoracic stria incomplete.
It is apparently a common insect in Central America.

13. **Carcinops miserula.**

Carcinops miserulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 14 [1], and 1861, t. 15. no. xxiv. fig. 15.

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, San Juan in Vera Paz (*Champion*).—COLOMBIA [1].

14. **Carcinops cavisternum,** sp. n. (Tab. V. fig. 21.)

Oblongo-ovalis, nigro-picea, nitida; fronte punctulata, stria tenuiter impressa; pronoto punctulato, stria laterali valide, antice tenuiter, impressa, ante scutellum subfoveolato; elytris striis dorsalibus parallelis, 1^{a}–4^{m} integris, 5^{a} ante medium interrupta, suturali punctorum brevi; propygidio parce punctato, pygidio tenuiter punctulato; prosterno bistriato; mesosterno antice profunde excavato, stria transversa late sinuata, in medio carinata; tibiis anticis fortiter bidentatis. Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

The first and second elytral striæ in this species are deep and very sparsely punctulate; but the striæ nearer the suture gradually become punctiform, especially at the apex, and the sutural stria consists only of ten or twelve punctures. The mesosternal sinus or excavation is very remarkable; it encroaches on the region beyond the transverse stria, the stria having the appearance of a ridge across it. The first segment of the abdomen is laterally bistriate. The type, from the colour, may be somewhat immature. One example.

15. **Carcinops atrata,** sp. n. (Tab. V. fig. 22.)

Oblonga, subparallela, parum depressa, nigra, nitida; fronte parce minute et grosse punctata, ante oculos distincte sinuata, stria integra; pronoto in medio subtiliter, laterali grosse, punctato, stria laterali valida, ante scutellum foveolato; elytris striis 1^{a}–3^{m} integris, crenatis, 4^{a} punctiformi, 5^{a} basi late interrupta, 6^{a} brevi; propygidio parce punctato, pygidio subtiliter punctulato; prosterno stria marginali sinuata; mesosterno late sinuato marginatoque; tibiis anticis bidentatis. Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Chacoj in Vera Paz (*Champion*).

The dorsal striæ of the elytra in this species resemble much those of *C. cavisternum*; they are strong at the humeral angle, and if traced backwards and forwards are found to gradually finish in punctures, of which the sutural stria is wholly composed. The sinus in the forehead in front of the eye is distinct and well marked, and so far as the species of *Carcinops* are at present known this is a unique character. The frontal stria continues its course at the sinuation and does not deviate in accordance with it. One example.

16. **Carcinops tejonica.**

Paromalus tejonicus, Horn, Proc. Am. Phil. Soc. xiii. p. 309 (1873) [1].

Hab. North America, California [1].—Mexico (*Deyrolle*).

17. **Carcinops viridicollis.**

Carcinops viridicollis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 96, t. 8. no. xxii. fig. 9 [1].

Hab. Mexico [1], Northern Sonora (*Morrison*), Jacale (*Sallé*), Mirador (*Höge*); Guatemala, near the city, Capetillo, Calderas, Zapote, Balheu, Purula (*Champion*).

This insect is apparently common in Guatemala. Examples received from the late Mr. Morrison bear the name of *Paromalus mimeticus*, but this species has the fifth dorsal stria abbreviated.

18. **Carcinops bellula.**

Carcinops bellula, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 16[1], and 1861, t. 15. no. xxiv. fig. 19.

Hab. Mexico (*Monchicourt*).—Colombia (*coll. Mniszech* [1]).

19. **Carcinops eximia,** sp. n. (Tab. V. fig. 23.)

Ovalis, perconvexa, supra æneo-viridis, nitida; antennis pedibusque piceis, tarsis flavis; fronte punctulata, marginata; pronoto parce punctulato, punctis grossis intermixtis, stria integra; elytris apice punctis, striis validis, crenatis, dorsalibus 1^{a}–3^{m} integris, 4^{a} et 5^{a} apice abbreviatis, antice conjunctis, suturali punctorum brevi; propygidio pygidioque parce et æqualiter punctulatis; prosterno bistriato; mesosterno sinuato marginatoque; tibiis anticis subdilatatis, bidentatis, mediis bispinosis. Long. $1\frac{1}{2}$ millim.

Hab. Guatemala, Las Mercedes 3000 feet (*Champion*).

This little insect belongs to the same section of the genus as *C. cuprina*, Mars., being convex, with the mesosternum somewhat broadly marginate. The fifth elytral stria is straight, and in some lights is apparently abbreviated at the base; but at this interval the stria is very fine, and is really joined to the fourth, which is bent over to meet it. Unique.

PAROMALUS.

Paromalus, Erichson, in Klug's Jahrb. der Ins. 1834, p. 167.

Nearly 100 species of this genus have been described and probably half as many again exist unnamed in collections.

The genus is very widely distributed, but is more numerously represented in Tropical America than elsewhere.

Most of the species are found under the bark of trees, but some of the convex forms which inhabit warm countries are found beneath stones or dead leaves where there is fungal growth. The characters of the species are often obscure owing to the absence

of sculpture of a distinctive nature on the dorsal region of the elytra. In addition to the twenty species included in the first section there are four others in the collection before me; these, having no salient characters, and the sex of the unique individuals of each being doubtful, are left undescribed for want of sufficient material—three are from Chontales, Nicaragua, and one from Cahabon, Guatemala.

1. *Elytra with a sutural stria.* (Species 1–20.)

1. **Paromalus verminosus,** sp. n.

Ovalis, convexiusculus, niger, nitidus; fronte punctulata, stria integra; pronoto dense punctato, stria antice tenuiter continuata; elytris striis 2 dorsalibus basi obliquis vel obsoletis, suturali valida, antice multum, postice parum, abbreviata; propygidio subtiliter punctulato, pygidio undique vermiculato; prosterno haud striato; mesosterno lateribus marginato, stria transversa triangulata; metasterno utrinque punctulato; tibiis anticis contortis dilatatis, intermediis 3-, posticis 1-spinosis. Long. $2\frac{3}{4}$–3 millim.

Hab. GUATEMALA, San Lucas, Capetillo, Zapote, San Gerónimo (*Champion*).

This is the largest species of *Paromalus* known as yet from Central America; it is a near ally of *P. cordipygus*, Mars., but is much broader, and more oval in shape. The pygidium is also wholly engraved with a vermiform sculpture in both sexes: in one it is fine and irregular, in the other very deep and apparently more regular.

2. **Paromalus inunctus.**

Paromalus inunctus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 23[1], and 1861, t. 15. no. xxv. fig. 5.

Hab. MEXICO, Cordova (*Sallé*).—BRAZIL, Santa Catarina[1].

There is a Mexican example of this species, determined by Marseul, in the Sallé collection.

3. **Paromalus malus.**

Paromalus malus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 24[1], and 1861, t. 15. no. xxv. fig. 6.

Hab. MEXICO[1] (*Flohr*), Cordova (*Sallé*), Jalapa (*Höge*).

Three examples.

4. **Paromalus cordipygus.**

Paromalus cordipygus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 19[1], and 1861, t. 15. no. xxv. fig. 1.

Hab. MEXICO, Cordova (*Sallé*[1]), GUATEMALA, near the city, Aceytuno, Capetillo (*Champion*).

Marseul's type is in the Sallé collection. Ten examples.

5. **Paromalus didymus.**

Paromalus didymus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 111, t. 8. no. xxiii. fig. 5[1].

Hab. GUATEMALA (*Sallé*), San Gerónimo (*Champion*).—VENEZUELA, Caracas[1].

6. **Paromalus selectus,** sp. n.

Ovalis, subdepressus, niger, nitidus; fronte sparse punctulata, stria valida; pronoto ante scutellum grosse punctato, stria integra; elytris grosse punctatis, striis humerali obsoletis, suturali antice multum, postice vix, abbreviata; propygidio undique æqualiter punctato; pygidio punctulato, in medio prave et profunde vermiculato; prosterno haud striato, lobo sparse punctato; mesosterno stria modice biangulata; metasterno sparse et tenuiter punctulatis. Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

This species is extremely like *P. didymus*, Mars.; but it is less convex, the sutural stria is less shortened posteriorly, and the legs and antennæ are red. Four examples.

7. **Paromalus notabilis,** sp. n. (Tab. VI. fig. 1.)

Ovalis, convexus, niger, nitidus; fronte sparse et tenuiter punctulata, stria marginali integra; pronoto æqualiter et parum dense punctato; elytris striis 1ª et 2ª dorsalibus brevibus, suturali valida, antice abbreviata, postice punctis cum margine juncta; propygidio sublævi; pygidio convexo, medio transversim foveolato; prosterno utrinque striato; mesosterno stria biangulata; metasterno in medio arcuatim bistriato. Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Purula in Vera Paz (*Champion*).

This species is very remarkable from having two lines, resembling such as enclose a parenthesis, impressed in the middle of the metasternum. The pygidium also has an irregular cluster of large punctures or foveæ across its centre, which is a character peculiar to this species. One example.

8. **Paromalus rogalis,** sp. n. (Tab. VI. fig. 2.)

Ovalis, convexiusculus, niger, nitidus; fronte subconcava, punctata, stria transversa integra; pronoto punctato, ante scutellum minute sed distincte acuminato, stria integra; elytris striis 1ª et 2ª punctiformibus, suturali multum antice et postice vix abbreviata; propygidio transversim punctato, margine late plano; pygidio sparse punctulato, apice profunde et prave vermiculato; prosterno punctato, lobo lateraliter striato, antice immarginato, postice haud striato; mesosterno modice sinuato, stria transversa acute biangulata; tibiis anticis subdilatatis, distincte 4-dentatis, intermediis fortiter 4-dentatis, posticis apice 3-spinosis. Long. 2 millim.

Hab. GUATEMALA, Cahabon and Chacoj in Vera Paz (*Champion*).

This species is very coarsely punctured on the sides of the elytra; the punctures are partly ocellated, and under the microscope those on the metasternum also assume this form. The first elytral stria, although punctiform, is almost complete. The metasternal stria is divided into three parts or loops, the central loop being about twice the width of the others. Three examples, probably all one sex.

9. **Paromalus pupillus,** sp. n.

Oblongo-ovalis, convexiusculus, niger, nitidus, undique punctulatus; fronte subconvexa, stria antice invalida; pronoto stria lateraliter valida, integra; elytris striis dorsalibus brevibus, suturali antice multum abbre-

viata, postice indistincte impressa; propygidio subtiliter punctulato; pygidio grosse et profunde vermiculato; prosterno sparse punctulato, minutissime et densissime striguloso, haud striato; mesosterno stri acute biarcuata; metasterno stria laterali integra; tibiis anticis 4-dentatis, intermediis 3-spinosis. Long. $2\frac{1}{5}$ millim.

Hab. MEXICO, Cerro de Plumas (*Höge*).

Under a high power this species is seen to be wholly, but very minutely, strigose, but this sculpture is more evident on the sternal plates than above. The sutural stria is punctiform and not very distinct, and is much abbreviated in front. Unique.

10. **Paromalus orbus,** sp. n.

Ovalis, subdepressus, niger, nitidus; fronte parce punctulata, minutissime et densissime strigulosa, transversim convexa, stria integra; pronoto antice vix dense punctulato, postice parum grosse punctato, stria integra; elytris striis dorsalibus obsoletis, suturali valida, antice solum abbreviata; propygidio prave et profunde sulcato; prosterno minutissime et densissime striguloso, parce punctulato, immarginato, haud striato; mesosterno stria bisinuata; pedibus rufis; tibiis anticis 4-dentatis, intermediis 3-spinosis. Long. 2 millim.

Hab. BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*).

The punctuation of the propygidium distinguishes this insect from its congeners; and the usual vermiculations of the pygidium in the genus give place to wide and deep sulci. The latter are confined to a somewhat ill-defined triangular area in the middle of the pygidium, leaving a transverse space at the base, which is only finely punctured. Unique.

11. **Paromalus sobrinus,** sp. n.

Ovalis, convexiusculus, niger, nitidus, undique punctatus; antennis clava rufa; pedibus piceis; fronte pronotoque striis integris; elytris striis 1ª et 2ª obsoletis, suturali utrinque valde abbreviata; propygidio minute et parce punctulato; pygidio punctulato, profunde vermiculato; prosterno parum lato, parce punctato et minutissime striguloso; mesosterno stria valida, biangulata, metasterno æqualiter punctulato; tibiis modice dilatatis, anticis 4-dentatis, intermediis 4-spinosis. Long. 2 millim.

Hab. GUATEMALA, near the city (*Champion*).

This species has a broader prosternum than any other in the present series. The metasternal striæ are well marked, and they are connected with the marginal stria of the mesosternum. One example.

12. **Paromalus similis,** sp. n. (Tab. VI. fig. 3.)

Ovalis, convexiusculus, niger, nitidus; fronte parce punctulata, stria integra, ante oculos subconcava; pronoto punctato, stria completa, ante scutellum minute acuminato; elytris striis dorsalibus brevibus, suturali antice multum, postice parum, abbreviata; propygidio transversim punctulato; pygidio punctulato, grosse et profunde vermiculato; prosterno haud striato, minutissime et densissime striguloso, parce punctato; mesosterno stria valida modice biangulata, lateribus striato; tibiis antice parum contortis et dilatatis. Long. $2\frac{1}{5}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

This species differs from *P. sobrinus* in the prosternum being narrower, and

in the metasternum being almost smooth, the punctures of the latter being very minute and scattered. The sutural stria of the elytra is also less abbreviated in front and behind, and after breaking up into punctures nearly reaches the apex. Only one example.

13. **Paromalus hariolus.**

Paromalus hariolus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 22[1], and 1861, t. 15. no. xxv. fig. 4.

Hab. Mexico, Cordova (*Sallé*[1]).

The type is in the Sallé collection.

14. **Paromalus trifolium.**

Paromalus trifolium, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 21[1], and 1861, t. 15. no. xxv. fig. 3.

Hab. Guatemala, near the city (*Champion*).—Brazil[1].

There is one example from Guatemala in the Sallé collection which is referred, somewhat doubtfully, to *P. trifolium*.

15. **Paromalus fissus,** sp. n.

Subovalis, subdepressus, niger, nitidus; pedibus brunneis; fronte stria integra, vix punctulata; pronoto punctato, stria integra; elytris punctatis, striis 1ª et 2ª brevibus valide impressis, suturali utrinque multum abbreviata, margine inflexo lævi; prosterno haud striato; mesosterno transverso, stria modice biangulata; metasterno utrinque minime profundo et parce punctato; propygidio apice punctato, basi vermiculato; tibiis anticis 4-, intermediis 3-dentatis. Long. $1\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

The elytral striæ in this little species resemble sulci rather than the ordinary striations usual in the genus. The mesosternal stria (as in *P. selectus*, Lewis) is only moderately biangulate, and the three divisions are of nearly equal dimensions. Unique.

16. **Paromalus jejunus,** sp. n.

Oblongo-ovalis, subdepressus, niger, nitidus; fronte parce punctata, stria integra subelevata; pronoto undique punctato, stria laterali integra, pone oculos tenuissime continuata; elytra striis 1 et 2ª obsoletis, suturali antice multum, postice vix, abbreviata; propygidio parce, pygidio dense, punctatis; prosterno parcissime punctulato, lobo lateraliter striato, antice immarginato, basi haud striato; mesosterno stria transversa, biangulata; metasterno grosse et parce punctato; tibiis anticis 4-dentatis, intermediis 3- vel 4-spinulosis. Long. $1\frac{1}{4}$ millim.

Hab. Guatemala, Cubilguitz in Vera Paz (*Champion*).

This little species has one salient character in the frontal stria, which is slightly yet distinctly elevated. Two examples.

17. **Paromalus infimus.**

Paromalus infimus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 112, t. 8. no. xxiii. fig. 6[1].
Platysoma infimum, Dej. Cat. 3rd edit. p. 143.

Hab. Mexico, Cordova, Jalapa (*Höge*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Cahabon (*Champion*); Nicaragua, Chontales (*Janson*). — Venezuela, Caracas[1].

18. **Paromalus sincerus,** sp. n.

Oblongo-ovalis, subdepressus, niger, nitidus, supra punctatus; fronte ante oculos utrinque prominula, stria subvalida integra; pronoto stria marginali haud interrupta; elytris striis 1ª et 2ª distinctis, suturali antice multum, postice parum, abbreviata, margine inflexo, striato; propygidio punctato; prosterno lobo grosse punctato, marginato, haud striato; mesosterno transverso, stria late triangulata; tibiis anticis 4-dentatis, posticis bispinosis. Long. $2\frac{1}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*); British Honduras, Belize (*Blancaneaux*).

This species is apparently allied to the Cuban *P. productus,* Mars., which is, however, only known to us from description. In one sex the pygidium is marked in the middle with two deep circular furrows; in the other it has a rather deep irregular impression, and the propygidium is much more coarsely and somewhat rugosely punctured. The mesosternum is very wide, with the emargination equal to half its breadth. The metasternum is sparsely punctured, and the punctures are somewhat oval in shape. Twelve examples.

19. **Paromalus luderti.**

Paromalus luderti, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 25[1], and 1861, t. 15. no. xxv. fig. 7.

Hab. Mexico[1] (*Sallé*).

Three examples.

20. **Paromalus seminulum.**

Paromalus seminulum, Er. in Klug's Jahrb. der Ins. 1834, p. 171[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 120, t. 8. no. xxiii. fig. 12[2].

Hab. North America[1], Louisiana[2], Carolina[2].—Mexico, Teapa[2].

This species is a desideratum in the present series.

2. *Elytra without a sutural stria.* (Species 21–25.)

21. **Paromalus inflatus,** sp. n. (Tab. VI. fig. 4.)

Ellipticus, convexus, niger, nitidus, undique minutissime et densissime strigulosus; fronte parce punctulata, stria supra oculos obtuse angulata; pronoto punctulato, stria lateraliter valide, antice tenuiter, impressa; elytris striis obsoletis; propygidio pygidioque subtiliter punctulatis; prosterno parce punctulato; mesosterno stria leviter bisinuata; tibiis anticis 4-dentatis, intermediis 6- vel 7-spinosis. Long. $2\frac{1}{2}$ millim.

Hab. British Honduras, Belize (*Blancaneaux*).

The facies of this species resembles that of the elliptical and convex forms allied to *P. mus*, Mars., which occur under dead leaves and stones in the Eastern Archipelago. The strigose sculpture is exceedingly minute, and under the microscope is best seen on the sides of the thorax and on the metasternal plate. Sexual differences are not apparent in the two examples before us.

22. **Paromalus divaricatus,** sp. n. (Tab. VI. fig. 5.)

Ovalis, parum convexus, niger, nitidus; antennis pedibusque brunneis, clava rufa; fronte punctulata, stria tenuiter impressa; pronoto punctato, stria integra; elytris striis dorsalibus obsoletis, suturali nulla; propygidio parce, pygidioque apice dense, punctulatis; prosterno haud striato, parce leviter punctato; mesosterno stria transversa, biangulata; tibiis anticis 4-dentatis, intermediis spinulosis. Long. 2–2¼ millim.

Hab. GUATEMALA, near the city, Capetillo, Zapote (*Champion*).

The pygidium is bistriate in one sex; the striæ are fine and near the apex are somewhat parallel to each other, and in the middle they part from each other at right angles; the pygidium itself is reddish, and finely punctate, more densely so at the apex than at the base. The stria of the mesosternum is rather acutely, but not deeply, angulate on both sides, and the middle division of the stria is relatively very wide. Eighteen examples.

23. **Paromalus sagillatus,** sp. n. (Tab. VI. figg. 6, 6 *a*.)

Ovalis, depressiusculus, niger, nitidus, punctulatus; fronte pronotoque striis marginalibus integris; elytris striis dorsalibus obsoletis, suturali nulla; propygidio postice parce punctulato; pygidio (mas) in medio profunde triangulariter sulcato, (fem.) transversim bistriato; prosterno haud striato, magis lato; mesosterno biangulato; tibiis anticis 4-dentatis, intermediis spinulosis. Long. 2 millim.

Hab. MEXICO, Northern Sonora (*Morrison*).

This species is represented in the collection by two examples of opposite sexes. It is rather narrower than *P. divaricatus*, and the mesosternal stria has each of its divisions of equal breadth. The sulcus in the middle of the pygidium of the female is triangular and deep; in the other sex this sculpture is represented by two fine transverse striæ, the apical one being straight, the other slightly bent.

24. **Paromalus sulcatus,** sp. n. (Tab. VI. figg. 7, 7 *a*.)

Ovalis, depressiusculus, niger, nitidus, æqualiter punctulatus; fronte pronotoque striis marginalibus integris; elytris striis brevibus vel obsoletis, suturali nulla; propygidio undique punctulato; pygidio profunde transversim sulcato; prosterno lato, parce punctato, haud striato, minutissime et densissime striguloso; mesosterno stria acute biangulata; tibiis anticis 4-dentatis, intermediis spinulosis. Long. 2½ millim.

Hab. GUATEMALA, near the city, Calderas, Zapote (*Champion*).

Four examples. Resembles the preceding species; but the prosternum is not quite so broad, and the central division of the mesosternal stria is nearly equal to both the outer divisions. In what is presumably the female the transverse sulcus of the pygidium

is very deep, and is divided into two parts. In the other sex the sulcus is somewhat semicircular, regular, and not so deep, and there is a finer line also across the apex, the line and the sulcus enclosing a fine vermicular sculpture.

25. **Paromalus bilineatus.**

Paromalus bistriatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 114, t. 8. no. xxiii. fig. 8[1] (nec Erichs.).

Paromalus bilineatus, Mars. loc. cit. 1862, p. 27[2].

Hab. Mexico [1 2].

No example in this collection.

[*Obs.* In this division a unique example from Jalapa, Mexico, is left undetermined.]

RENIA.

Renia, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xv. p. 467 (1885).

Only two species of this genus have been as yet brought to light; one is from Parana, and the other from Mexico. The last named was found in ants' nests, under stones.

1. **Renia salvini,** sp. n. (Tab. VII. figg. 6, 7.)

Orbicularis, subconvexa, piceo-brunnea, nitida; fronte plana, lævi, subtiliter transversim strigosa, stria antice late interrupta; pronoto lævi, lateribus impresso, margine reflexo, angulis anticis rotundatis, basi utrinque angustissime punctato; elytris striis elevatis, 1[a]–4[m] integris, basi arcuatim continuatis, incurvatis, internis nullis, a humerali interna valida carinata integra; propygidio pygidioque parce et subtilissime punctulatis; prosterno bistriato, interstitia plana, antice punctato, lobo marginato; mesosterno marginato utrinque profunde sinuato; metasterno depresso; tibiis extus valde dilatatis, anticis rotundatis, posticis in medio angulatis. Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Atlisco in Puebla (*Höge*).

This species is much smaller than *R. meticulosa*, Lewis, and differs in sculpture and structure as follows:—the forehead has an interrupted stria, the thorax is more dilated and has its anterior angles less produced, the sutural stria (which is tuberculous in *R. meticulosa*) is wholly wanting, and the four hinder tibiæ are angulate in the middle on the outer edge. Two specimens.

EUCLASEA, gen. nov.

Orbicularis, convexa. Caput retractum; fronte plana, stria integra; mandibulis robustis. Antennis brevibus, sub frontis margine insertæ; scapo magno; clava articulo unico, subrotundato; funiculo sensim incrassato; fossa magna, in angulo prothoracis, profundissime excavata. Prosternum basi incisum, vix latum, striatum; lobo antico lato, brevissimo. Mesosternum in medio productum, receptum, immarginatum, haud impressum. Pronotum transversum, stria unica laterali. Elytris apice subarcuata, striis dorsalibus obsoletis. Propygidium hexagonum; pygidio semicirculare dejectum inferius. Femora et tibiæ valde dilatatæ.

This genus resembles *Eretmotus*, but the prosternum is not relatively broader than in

an ordinary *Hister*. The antennal fossa is round, and when viewed from the underside presents the whole of its orifice to the eye. The base of the propygidium has a fine marginal stria; and the apices of the elytra being shortened at the sutural point, a third segment of the abdomen is partially exposed in the form of a transverse triangle with a somewhat acute apex.

1. **Euclasea godmani,** sp. n. (Tab. VI. figg. 8, 9.)

Orbicularis, convexa, castanea, nitida; fronte subtilissime punctulata, pone oculos rugosa, stria integra; pronoto stria antice interrupta, basi linea punctorum distincta; elytris stria subhumerali integra, cæteris obsoletis; propygidio subtilissime punctulato; pygidio apice rugose bi-impresso; prosterno striis tenuibus, anticis conjunctis; mesosterno lævi, antice acute producto, immarginato; tibiis omnes compressæ, anticis 7- vel 8-denticulatis, mediis et posticis in medio angulatis. Long. $1\frac{1}{3}$ millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

Unique.

SAPRINUS.

Saprinus, Erichson, in Klug's Jahrb. der Ins. 1834, p. 172.

Between 300 and 400 species of this genus have been catalogued. Many of its representatives are local, some very widely distributed, and a few almost cosmopolitan. All are found to possess a dorsal sculpture more or less similar, which necessitates the student to seek for discriminating characters in the structure or in the sculpture of the sternal plates. The number of species of *Saprinus* (29) inhabiting Central America is comparatively small considering the extent of the area.

1. **Saprinus discoidalis.**

Saprinus discoidalis, Lec. Ann. Lyc. N. York, v. p. 167 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 375, t. 16. fig. 18 [2].

Hab. NORTH AMERICA, Vallecitas in California [1 2].—MEXICO, Villa Lerdo in Durango (*Höge*).

One small example.

2. **Saprinus lugens.**

Saprinus lugens, Er. in Klug's Jahrb. der Ins. 1834, p. 181 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 395, t. 16. fig. 34 [2]; Blackb. & Sharp, Sc. Trans. R. Dubl. Soc. iii. (ser. 2) p. 225 [3].
Saprinus californicus, Mannerh. Bull. Mosc. 1843, ii. p. 259 [4].
Hister californicus, Eschsch. Dej. Cat. 3rd edit. p. 142.
Saprinus lugubris, Er. in litt.
Hister mexicanus, Chev. Dej. Cat. l. c.
Saprinus consimilis, Walk. Nat. Vancouv. ii. p. 319 (1866) [5].

Hab. NORTH AMERICA, Vancouver [5], Missouri [2], Oregon [2], New Mexico [2], California [2 4].

—Mexico [1], Northern Sonora (*Morrison*), San Luis Potosi (*Dr. Palmer*), Chihuahua, Monterey, Durango city, Villa Lerdo, Aguas Calientes, Zimapan, Sayula, Cholula, Tupataro, Guadalajara, Mexico city, San Andres Chalchicomula, Jalapa, Oaxaca, Chilpancingo (*Höge*), Puebla, Guanajuato (*Sallé*), Orizaba [2]; Guatemala [2] (*Sallé*), near the city (*Salvin*), Capetillo (*Champion*).—Hawaiian Islands [3].

This widely distributed species is very abundant in Northern Mexico, and extends southwards to Guatemala.

3. **Saprinus solitarius,** sp. n. (Tab. VI. fig. 10.)

Ovalis, nigro-æneus, nitidus; antennis pedibusque piceis; fronte dense subrugoso-punctata, stria obsoleta; pronoto lateribus rugoso basique punctata, pone oculos impresso; elytris dense rugoso-punctatis, margine areaque scutellari usque ad 2^{m} dorsalem lævi, stria suturali integra, antice arcuatim coeunte cum 4^{a} dorsali dimidiata, 3^{a} brevi, 1^{a} et 2^{a} dimidiatis, humerali valide, subhumerali brevissima; pygidio propygidioque dense et grosse punctatis; prosterno punctulato, striis postice abbreviatis, antice divaricatis ascendentibus; mesosterno marginato, parce et grosse punctato; tibiis anticis 7- vel 8-denticulatis. Long. 4 millim.

Hab. Mexico, Northern Sonora (*Morrison*).

The chief distinction between this insect and *S. æneus*, Fabr., is in the prosternal stria. The head and pygidium are more coarsely punctured than in the Fabrician species, but the elytral sculpture is almost identical. One specimen.

4. **Saprinus nitidulus.**

Hister nitidulus, Payk. Fauna Suec. i. p. 45; Fabr. Syst. Eleuth. i. p. 85.
Saprinus nitidulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 402, t. 17. fig. 40 [1].
Hister krynickyi, Krynick, Bull. Mosc. v. p. 113 (1832); Hochhuth, Bull. Mosc. 1872, iii. p. 224.
Hister acuminatus, Fabr. Ent., Suppl. p. 37.
Hister semistriatus, Herbst, Käf. iv. p. 306, t. 35. fig. 6.
Saprinus punctato-striatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 459, t. 12. fig. 19 (apud Joh. Schmidt, Deutsche ent. Zeit. xxix. p. 440).
Var. *Saprinus sparsipunctatus*, Motsch. Bull. Mosc. 1849, iii. p. 97; Mars. loc. cit. 1862, p. 457, t. 12. fig. 18.
Var. *Saprinus turcomanicus*, Ménétr. Mém. Ac. Petr. vi. p. 55, t. 2. fig. 9 (1849); Motsch. Bull. Mosc. 1849, iii. p. 95.
Var. *Saprinus uralensis*, Motsch. loc. cit. p. 98.

Hab. Mexico, Cordova (*Sallé*).—Europe [1]; Siberia [1]; Syria [1], &c.

Of this common and widely distributed species there is a single small example from Mexico in the Sallé collection.

5. **Saprinus diptychus.**

Saprinus diptychus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 418, t. 17. fig. 52 [1].

Hab. Mexico, Yucatan (*Pilate* [1]).

6. **Saprinus subdiptychus.**

Saprinus subdiptychus, Mars. Ann. Soc. Ent. Belg. xiii. 1870, p. 111 [1].

Hab. MEXICO [1].

Not in the present collection.

7. **Saprinus inausus.**

Saprinus inausus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 461, t. 16. fig. 21 [1].

Hab. MEXICO [1].

Only known to me from the description.

8. **Saprinus æneicollis.**

Saprinus æneicollis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 424, t. 17. fig. 56 [1].

Hab. MEXICO [1], Cordova (*Sallé*), Oaxaca (*Sallé*, *Höge*), Monterey in Nuevo Leon, Zapotlan, Jalapa (*Höge*); GUATEMALA, Volcan de Atitlan, Capetillo, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).

In this common American insect the female has a curious impression at the apex of the pygidium.

9. **Saprinus lubricus.**

Saprinus lubricus, Lec. Ann. Lyc. N. York, v. p. 169 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 410, t. 17. fig. 46 [2].

Hab. NORTH AMERICA, San Francisco and San Diego in California [1 2].—MEXICO, Guanajuato (*Sallé*), Jalapa (*Höge*); GUATEMALA, Cerro Zunil, San Joaquin (*Champion*).

Central-American specimens differ a little in punctuation from those from the United States, but cannot be satisfactorily separated.

10. **Saprinus bohemani.**

Saprinus bohemanni, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 466, t. 16. fig. 26 [1].

Hab. HONDURAS [1].

There is no representative in this collection.

11. **Saprinus guyanensis.**

Saprinus guyanensis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 453, t. 18. fig. 76 [1].
Hister guyanensis, Dej. Cat. 3rd edit. p. 142.

Hab. MEXICO, Zacualtipan in Hidalgo, Tapachula in Chiapas (*Höge*).—GUIANA, Cayenne [1]; BRAZIL, Pará [1]; ANTILLES, Cuba [1].

12. **Saprinus blissoni.**

Saprinus blissonii, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 454, t. 18. fig. 77.

Hab. Mexico, Jalapa, Esperanza (*Höge*); Guatemala, Panzos, Capetillo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).—Venezuela, Caracas [1].

13. **Saprinus triangulifer.**

Saprinus triangulifer, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 462, t. 18. fig. 84 [1].

Hab. Mexico, Yucatan (*Pilate* [1]).

14. **Saprinus belioculus.**

Saprinus belioculus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 473, t. 10. fig. 32 [1].

Hab. Mexico, Cordova, Puebla (*Sallé*), Aguas Calientes city (*Höge*); Guatemala, San Gerónimo (*Champion*).

15. **Saprinus blandus.**

Saprinus blandus, Er. in Klug's Jahrb. der Ins. 1834, p. 188 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 475, t. 18. fig. 95 [2].

Hister lebasii, Dej. Cat. 3rd edit. p. 142.

Hab. Guatemala, near the city, Zapote (*Champion*); Panama, Bugaba (*Champion*).—Colombia [1 2]; Brazil, Pará [1 2].

16. **Saprinus campechianus.**

Saprinus campechianus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 474, t. 18. fig. 94 [1].

Hab. Mexico, Campeche in Yucatan (*Pilate* [1]).

17. **Saprinus tarnieri.**

Saprinus tarnieri, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 480, t. 16. fig. 38 [1].

Hab. Mexico, Guanajuato (*Sallé*), Jalapa, Mazatlan, Huetamo in Michoacan (*Höge*); Guatemala, Cerro Zunil 4000 feet, San Joaquin (*Champion*).—Antilles, Cuba [1].

18. **Saprinus ignotus.**

Saprinus ignotus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 496, t. 19. fig. 133 [1].

Hab. Mexico [1], Puebla (*Sallé*), Cordova (*Höge*); Nicaragua, Chontales (*Janson*).—Colombia [1].

19. **Saprinus fimbriatus.**

Saprinus fimbriatus, Lec. Ann. Lyc. N. York, v. p. 169 [1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 495, t. 19. fig. 112 [2].

Hab. North America [2], California [1 2].—Mexico, Villa Lerdo in Durango (*Höge*).

Found in abundance by Herr Höge at Villa Lerdo.

20. **Saprinus vafer.**

Saprinus vafer, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 498, t. 19. fig. 155 [1].

Hab. MEXICO, Cordova (*Höge*), Vera Cruz [1]; GUATEMALA, Champerico (*Champion*).

Mr. Champion met with this insect on the sea-coast.

21. **Saprinus ciliatus.**

Saprinus ciliatus, Lec. Ann. Lyc. N. York, v. p. 168 [1].

Hab. NORTH AMERICA, Colorado [1].—MEXICO, Tapachula in Chiapas (*Höge*).

One specimen.

22. **Saprinus plenus.**

Saprinus plenus, Lec. Ann. Lyc. N. York, v. p. 169 [1].

Saprinus minutus, Lec. Monogr. in Bost. Journ. Nat. Hist. v. p. 43, t. 5. fig. 9 [2]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 486, t. 18. fig. 104 [3].

Saprinus minusculus, Mars. loc. cit. 1862, p. 716 [4].

Hab. NORTH AMERICA, United States [3 4], Colorado [1], California [2].—MEXICO (*Flohr*). Durango city, Villa Lerdo, Monterey, Aguas Calientes city, Santa Clara in Chihuahua, Zimapan, Tehuacan, Mexico city, Tapachula in Chiapas (*Höge*).

23. **Saprinus vitiosus.**

Saprinus vitiosus, Lec. Ann. Lyc. N. York, v. p. 169 [1].

Hab. NORTH AMERICA, Colorado [1].—MEXICO, Aguas Calientes city (*Höge*).

Two specimens.

24. **Saprinus quæsitus,** sp. n. (Tab. VI. fig. 11.)

Oblongo-ovalis, obscuro-æneus, nitidus; pedibus piceis; fronte punctulata, antice subfoveolata, stria brevi tenui impressa; pronoto basi lateribusque valide, in medio subtiliter, punctato, ante scutellum impresso; elytris striis validis, 1ª et 2ª ultra medium æqualibus, 3ª et 4ª punctato-striatis, in medio abbreviatis, 4ª versus scutellum arcuata, suturali punctiformi basin non attingente, humerali obliqua, postice parce punctato, antice subtilissime punctulata; pygidio convexo, dense punctato; prosterno striis rectis, punctatis, antice junctis, postice abbreviatis; mesosterno marginato punctato, stria integra; metasterno basi transversim punctato. Long. $2\frac{1}{2}$–3 millim.

Hab. GUATEMALA, near the city, Capetillo, San Gerónimo (*Champion*).

This species comes near to *S. pectoralis*, Lec., and like it has the prosternal striæ convergent in front and abbreviated behind; but it differs in size and in the elytral striæ.

25. **Saprinus gemmenus,** sp. n. (Tab. VI. fig. 12.)

Ovalis, convexiusculus, metallicus, supra densissime punctatus; fronte strigoso-punctata, stria valide integra, antice transversim recta; elytris area subhumerali et juxta scutellum rotundata, politis, stria 1ª distincta,

cæteris (subhumerali excepta) obsoletis; propygidio pygidioque dense æqualibus punctatis; prosterno striis anticis approximatis, posticis divaricatis abbreviatis; mesosterno stria integra, grosse punctato; tibiis anticis 6- vel 7-denticulatis, posticis spinosis. Long. $2\frac{3}{4}$–$3\frac{3}{4}$ millim.

Hab. MEXICO, Oaxaca (*Höge*); NICARAGUA, Chontales (*Janson*).

Two examples. *S. gemmenus* belongs to Marseul's group 6. It is closely allied to the European *S. specularis*, from which it differs chiefly in the transverse smooth disc on the thorax, the clear (not rugose) punctuation of the upper surface, and the thickly punctured metasternum. The clypeus also is narrower, and carinate laterally and in front. The sutural stria where it crosses the smooth scutellar space is punctiform.

26. **Saprinus conspectus.**

Saprinus conspectus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 708, t. 19. fig. 145[1].

Hab. MEXICO, Cordova, Oaxaca (*Höge*), Vera Cruz[1].

Three examples.

27. **Saprinus dentipes.**

Saprinus dentipes, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 728, t. 20. fig. 160[1].

Hab. MEXICO[1], Oaxaca (*Höge*).

One example.

28. **Saprinus bistrigifrons.**

Saprinus bistrigifrons, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 729, t. 20. fig. 161[1].

Hab. MEXICO[1].—BRAZIL, Ceara.

The type of this species, which is in the Lewis collection, is much smaller than ordinary specimens from Ceara, where the insect is common.

29. **Saprinus discors.**

Saprinus discors, Lec. Proc. Acad. Phil. 1859, p. 315[1].

Hab. MEXICO[1].

[NOTE.—*Gnathoncus rotundatus*, Kugel, occurs in North and South America, but no example has yet been recorded from the Central Region.]

PACHYLOPUS.

Pachylopus, Erichson, in Klug's Jahrb. der Ins. 1834, p. 196.

The type of this genus, *P. dispar*, came from the Cape of Good Hope; three other species have since been added, all from North America; one of these latter is now known to extend southwards to Guatemala.

1. Pachylopus gaudens.

Pachylopus gaudens, Lec. Ann. Lyc. N. York, v. p. 165[1]; Horn, Proc. Am. Phil. Soc. xiii. p. 345 (1873).

Hab. Mexico, Tapachula in Chiapas (*Höge*); Guatemala, Champerico (*Champion*).

Three examples from the sea-coast, at Champerico, one measuring only $2\frac{1}{2}$ millim.; many specimens from Tapachula.

TRYPANÆUS.

Trypanæus, Eschscholtz, Zool. Atl. i. p. 10 (1829); Marseul, Monogr. in Ann. Soc. Ent. Fr. 1856, p. 103.

Tryponæus, Erichson, in Klug's Jahrb. der Ins. 1834, p. 198.

The *Trypanæi* are very widely distributed, but are most numerous in the tropical regions of the New World; nearly seventy species have been described. None are found in Europe, nor is an African species known; one is found in Japan in lat. 44°.

These insects feed upon various species of *Platypus*, and, according to Mr. Champion, are often to be found in abundance in the hottest sunshine crawling on the bark of infected trees.

The sexual characters of the species are very curious.

1. Trypanæus torpedo. (Tab. VI. fig. 13, ♀.)

Tryponæus torpedo, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xv. p. 469[1].

Hab. Nicaragua, Chontales (*Belt*[1]); Panama, Bugaba (*Champion*).

There are six examples of this species from the State of Panama in the present collection; one of these is a male, the sex previously unknown. It differs from the same sex of *T. elongatus*, Mars., in having the rostrum triangular, as in *T. noxius*, Mars.; and in the thoracic tubercles being widely separated from each other. This is the largest known species of the genus.

2. Trypanæus quadrituberculatus.

Trypanæus 4-tuberculatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 120, t. 2. fig. 12[1] (♂).

Trypanæus teres, Mars. loc. cit. p. 111, t. 2. fig. 3[2] (♀).

Hab. Guatemala, Cerro Zunil, Las Mercedes (*Champion*); Panama, Bugaba (*Champion*).—Colombia [1] [2].

3. Trypanæus noxius.

Trypanæus noxius, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 838, t. 2, no. v. fig. 1[1].

Hab. Mexico, Cordova (*Sallé*[1]); Guatemala, Las Mercedes, Chacoj (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

4. Trypanæus spiniger.

Trypanæus spiniger, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 119, t. 2. fig. 11 [1] (♂).
Trypanæus quadricollis, Mars. loc. cit. p. 114, t. 2. fig. 6 [2] (♀).

Hab. MEXICO, Santecomapan, Cordova (*Sallé*), Mirador, Vera Cruz (*Höge*); GUATEMALA, Yzabal (*Sallé* [2]), Purula, Panima, San Juan in Vera Paz, Las Mercedes, Cerro Zunil (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Tolé (*Champion*).—COLOMBIA [1 2].

This is the commonest species of the genus in Central America. About two hundred examples have been received.

5. Trypanæus punctinotus.

Trypanæus punctinotus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 840, t. 2. no. v. fig. 2 [1] (♀).

Hab. MEXICO, Cordova (*Sallé* [1]).

The type specimen is contained in the Sallé collection. The male is unknown.

6. Trypanæus montivagus, sp. n. (Tab. VI. fig. 14, ♂.)

♂. Cylindricus, parum elongatus, ater, nitidus; fronte plana, subtiliter punctulata; rostro obtuso, tenue marginato, apice rufo, minute 3-denticulato; pronoto antice retuso, angulis anticis prominulis, pone oculos foveolato, stria laterali integra, antice fortiter postice leviter punctato; elytris sparse punctulatis; pygidio griseo-piloso, fortiter rugoso-punctato, disco in medio concavo; prosterno antice lato, lateralibus subparallelis, bistriato; mesosterno lobo obtuso, stria antice interrupta; metasterno in medio longitudinaliter sulcato; tibiis antice 4-, intermediis 6-dentatis. Long. 4 millim.

Hab. GUATEMALA, Quiche Mountains 9000 feet (*Champion*).

One male example. This species is more parallel than *T. vulcanius*, and the structure of the prosternum is wholly different. The concavity in the disc of the pygidium is a character unknown in any other described *Trypanæus*. A female example from Purula, Guatemala (*Champion*), is possibly the other sex of this species.

7. Trypanæus luteivestis.

Trypanæus luteivestis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1860, p. 842, t. 2. no. v. fig. 4 [1] (♂).
Trypanæus pallidipennis, Mars. loc. cit. p. 841, t. 2. no. v. fig. 3 [2] (♀).
Tripanidius flavipennis, Chevr. Rev. Zool. 1858, p. 209 [3] (nec Mars.).

Hab. MEXICO [2], Cordova (*Sallé* [1]); GUATEMALA, Capetillo, Balheu, Chiacam (*Champion*).—ANTILLES, Cuba [3].

Ten examples.

8. Trypanæus flavipennis.

Trypanæus flavipennis, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 117, t. 2. fig. 9 [1].

Hab. MEXICO [1]; GUATEMALA, El Tumbador, Zapote, Panima in Vera Paz (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

9. **Trypanæus ampullaceus,** sp. n. (Tab. VI. fig. 15, ♀.)

♀. Oblongus, niger, nitidus; fronte leviter impressa, haud striata, parce punctulata, pronoto parce punctato, stria antice interrupta; elytris punctulatis, macula pallida transversim notatis; pygidio conico, elongato, apice obtuso; propygidio magis grosse punctato; prosterno mesosternoque validis marginatis; metasterno in medio longitudinaliter sulcato; tibiis anticis 5-, intermediis 6-dentatis, posticis basi spinulosis. Long. 4 millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Three examples. Only the female of this species has yet been discovered; it may be placed in the list between *T. pictus* and *T. bisulcifrons*, Mars. In outline it represents the form of an inverted bottle. The great length of the pygidium will serve as a character to separate *T. ampullaceus* from all the other maculate species.

10. **Trypanæus proboscideus.**

Bostrichus proboscideus, Fabr. Syst. Eleuth. ii. p. 385 [1].
Hister proboscideus, Payk. Monogr. Hist. p. 88, t. 8. fig. 4 [2].
Trypanæus proboscideus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 128, t. 2. fig. 21 [3].
Trypanæus carthagenus, Mars. loc. cit. 1857, p. 402, t. 11. no. xxxv. fig. 21 [4] (♂).
Trypanæus pauperculus, Dej. Cat. 3rd edit. p. 144 [5] (♀).

Hab. Mexico, Mirador (*Höge*); Guatemala, Zapote (*Champion*).—South America [1 2]; Colombia, Cartagena [3 4 5].

11. **Trypanæus tuberculifrons.** (Tab. VI. fig. 17, ♀.)

Trypanæus tuberculifrons, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 126, t. 2. fig. 18 [1] (♂).
Trypanæus bicaudatus, Mars. loc. cit. p. 127, t. 2. fig. 19 [2] (♀).

Hab. Mexico (*Flohr*); Guatemala, Zapote (*Champion*); Panama, Tolé (*Champion*).—Colombia [1 2].

In this species the prosternum in front of the intermediate coxæ is longitudinally trisulcate and the tarsi are very slender.

Three female examples, one of which is figured.

12. **Trypanæus bifidus,** sp. n. (Tab. VI. fig. 16, 16 *a*, ♀.)

♂. Cylindricus, parum elongatus, ater, nididus; fronte impressa, transversim strigosa, at parce et grosse punctata; rostro rufo, apice acuto, reflexo, in medio subcarinato, marginalibus subelevatis; pronoto valide punctato, stria integra; elytris brunneis, punctulatis; pygidio conico; prosterno marginato, apice acuto, ante basin constricto; mesosterno metasternoque haud distinctis longitudinaliter strigosis at parce punctatis, marginatis, in medio sulcatis; tibiis anticis 4-, intermediis 7-dentatis, posticis pilosis, haud dilatatis.

♀. Fronte leviter impressa, sparse punctulata; rostro brevi, obtuso, apice utrinque denticulato; pygidio acuto, compresso, apice bifido. Long. 3½ millim.

Hab. Mexico, Mirador (*Höge*); Guatemala, Zapote, Balheu, Tamahu (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Upwards of forty examples have been captured, the majority of which are from the State of Panama.

This species closely resembles *T. tuberculifrons*, but the transverse strigosity of the forehead and the longitudinal sculpture of the sterna are sufficient to separate it from any described species.

13. **Trypanæus columellaris,** sp. n. (Tab. VI. fig. 18, ♂.)

♂. Cylindricus, parum elongatus, ater, nitidus; fronte strigoso-punctata, antice retro-angulata; rostro rufo, modice reflexo; pronoto sat dense punctato, minute transverso-strigoso, stria antice interrupta; elytris obscure brunneis, subtiliter punctatis; pygidio conico, sat dense punctato; prosterno brevi, in medio longitudinaliter sulcato, antice obtuso; mesosterno marginato, trisulcato, antico obtuso producto; antennis pedibusque rufo-brunneis; tibiis anticis 4-, intermediis 6-dentatis, posticis ciliatis.

♀. Fronte leviter impressa; rostro obtuso, apice utrinque minute tuberculatis; pygidio compresso, obscure bifido. Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Pantaleon 1700 feet (*Champion*).

This insect is smaller than *T. vulcanius*. The male has a transverse deeply sinuous ridge across the forehead at the base of the rostrum, which is a very remarkable specific character. In the female the apex of the pygidium is not so distinctly bifid as in the preceding species.

Six examples, four males and two females.

14. **Trypanæus vulcanius,** sp. n. (Tab. VI. figg. 19, 19 *a*, ♂.)

♂. Cylindricus, parum elongatus, ater, nitidus; fronte transversa, rugosa, concava; rostro brevi, reflexo, compresso, margine vix elevato, apice obtuso at bifido; pronoto antice truncato, sparse punctato; elytris subtiliter punctulatis; pygidio nudo, obtuso, sat dense punctato; prosterno trigono, in medio longitudinaliter sulcato; mesosterno marginato; metasterno sparse punctato; tibiis anticis 6-, intermediis 7-dentatis, posticis flavo-ciliatis. Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

One example. This species is rather larger than *T. tuberculifrons*, which it may follow in the catalogue. The profile exhibits a bifid rostrum, which is very peculiar (fig. 19 *a*).

15. **Trypanæus aculeatus,** sp. n. (Tab. VI. fig. 20, ♂.)

♂. Cylindricus, niger, nitidus; fronte impressa; rostro paullo reflexo, apice acuto; pronoto valide punctato, angulis anticis prominulis, stria laterali integra; elytris brunneis, sparse et subtiliter punctulatis; pygidio conico, sat dense punctulato; prosterno brevi, medio late sulcato; meso- metasternoque sulcatis, longitudinaliter strigosis, laterali marginatis; antennis pedibusque rufis; tibiis anticis 5-, intermediis 6-dentatis.

♀. Fronte concava; rostro apice bidentato; pygidio acute et longissime producto. Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Two specimens. In this species the sternal sulcus is continuous from the first segment of the abdomen to the apex of the mesosternum, interrupting anteriorly the margin of the latter. The first segment of the abdomen in the male is rugosely and irregularly striate, and the punctures on the under surface of the insect are very

distinctly elongate. In both sexes the elytra are narrowed behind, so that there is no interruption in the outline between them and the long pygidium; the latter in the female is nearly one third of the length of the insect.

16. **Trypanæus parallelus,** sp. n. (Tab. VI. figg. 21 ♂, 22 ♀.)

♂. Cylindricus, angustatus, parallelus, niger, nitidus; fronte impressa, rugoso-punctata; capite minute transverso-strigosa; rostro excavato, apice rufo, reflexo; pronoto stria laterali integra, parce punctato, ante scutellum depresso, lævi, unifoveolato; elytris punctulatis; pygidio brevi, aspere punctato, flavo-piloso; prosterno subparallelo, apice truncato, laterali invalide striato; mesosterno brevi, antice immarginato; metasterno longissimo, medio longitudinaliter sulcato, sparse punctulatis; tibiis anticis 5-, intermediis 6-dentatis, posticis brevibus, basi angulatis.

♀. Fronte leviter impressa; pygidio elongato, obtuse producto. Long. 3 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

There is one singular character in this species: in front of the scutellum for about a fourth part of the length of the thorax there is an absence of punctures and in their place a longitudinal impression, in the anterior part of which is a well-marked fovea. This character alone has enabled me to associate the sexes, as it is common to both male and female.

The metasternum in *T. parallelus* is more than seven times as long as the mesosternum.

Three examples, two males and one female.

17. **Trypanæus angustatus,** sp. n. (Tab. VI. figg. 23 ♂, 24 ♀.)

♂. Cylindricus, angustatus, parallelus, niger, nitidus; fronte depressa, inter oculos tuberculata; rostro rufo, laterali parallelo, apice trigono, reflexo, in medio carinato; pronoto antice retuso, truncato, stria pone oculos interrupta, angulis rufis, ante scutellum parce punctato; elytris sparse punctulatis; propygidio pygidioque dense sat grosse punctatis; prosterno modice angustato, parallelo, sulcis marginalibus validis antice junctis; mesosterno stria integra, lobo obtuso; metasterno longissimo, in medio (antice valide, medio tenuiter, postice modice) longitudinaliter sulcato, subtilissime at sparse punctulatis; tibiis anticis 5- vel 6-, intermediis valide 5-dentatis, posticis brevibus, basi subangulatis.

♀. Fronte depressa; rostro apice truncato, immarginato; pygidio conico, modice producto, subtus plano. Long. 3 millim.

Hab. GUATEMALA, Capetillo, Calderas 6000 feet (*Champion*).

There is no salient character in this species, as in the last, whereby to associate the sexes; but I have every reason to believe that I have rightly united them. The sulcus in the metasternum is alike in both sexes, as they are here regarded, viz. very wide for about two thirds of its length, then narrowing at the middle and widening out again towards the base.

Six examples and some fragments.

TERETRIUS.

Teretrius, Erichson, in Klug's Jahrb. der Ins. 1834, p. 201.

This genus is represented in our catalogues by about twenty-five species, but doubtless many more remain to be discovered. Its members are widely spread, though

they are generally of rare occurrence. In a series of about eighty species of Histeridæ from Japan the genus *Teretrius* is unrepresented.

1. **Teretrius rufulus.**

Teretrius rufulus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 139, t. 3. fig. 6[1].

Hab. GUATEMALA, Yzabal (*Sallé*[1]).—ANTILLES (*coll. Lewis*).

2. **Teretrius longulus,** sp. n.

Cylindricus, parallelus, brunneo-nitidus, undique sat dense et fortiter punctatus; antennis pedibusque rufis; pronoto stria marginali sinuato; prosterno lobo lato, basi leviter canaliculato, bistriato, fortiter punctato; mesosterno antice acuminato, marginato, stria transversa postice a metasterno distincto; tibiis anticis 6-, intermediis 5-dentatis, posticis 3- vel 4-spinosis. Long. 2 millim.

Hab. MEXICO, Guanajuato, Cordova (*Sallé*).

This species is about the size of *T. picipes* (Fabr.), but is proportionally longer. The prosternum also is canaliculate, rather than impressed, at the base; the thoracic stria is more sinuate before the base; and the punctures of the upper surface are conspicuously larger and much more dense. The striæ of the prosternum are strong at the base, and gradually lessen until they disappear before the middle.

3. **Teretrius orbus,** sp. n.

Cylindricus, brevis, piceo-brunneus, pedibus ferrugineis, supra fortiter punctatus, subtus opacus, sparse ocellato-punctatus; pronoto stria valide integra, pone oculos leviter angulata; elytris stria basali obliqua; prosterno lato, haud striato; mesosterno late marginato, antice obtuso, stria utrinque interrupta; pygidio convexo, punctulato; tibiis anticis 6-, intermediis 5-spinosis, posticis spinosis. Long. 2 millim.

Hab. GUATEMALA, Pantaleon 1700 feet (*Champion*).

One specimen. This species has the facies and general outline of a *Teretriosoma*, but as the pygidium is convex it is placed in *Teretrius*. The clearly defined oblique stria, which occupies one third of the length of the elytra, is similar to that of *T. obliquulus*, Lec., and *T. segnis*, Mars.

TERETRIOSOMA.

Teretriosoma, Horn, Proc. Am. Phil. Soc. xiii. p. 347 (1873).

The more prominent representatives of this genus are from the New World; but one very distinct species has been captured in Ceylon (*T. facetum*, Lewis), and another, less typical (*T. somerseti*, Mars.), has been brought from Australia. *Teretriosoma* was established by Dr. Horn upon a single species, *T. chalybæum*, from Texas; six are now known from Central America. The genus is very closely allied to *Teretrius*, and when more species of it are brought to light it may require to be re-characterized. At present the double pygidium is the chief character relied on to separate it from *Teretrius*.

1. **Teretriosoma virens.**

Teretrius virens, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 136, t. 3. fig. 3[1].

Hab. GUATEMALA, Yzabal (*Sallé*[1]), Chacoj, Zapote, Pantaleon 1700 feet, Paraiso (*Champion*); NICARAGUA, Chontales (*Janson*).

Eight examples. *T. virens* differs from the Texan *T. chalybæum*, Horn, in its much smaller size, and in having the scape of the antennæ clothed with flavous hairs, the inferior portion of the pygidium much less concave, and the mesosternal stria interrupted at the apex. This last-mentioned character is more conspicuous in some specimens than in others, being more or less dependent on the existence of one or two punctures which, when present, encroach on the margin.

2. **Teretriosoma impressisternum,** sp. n. (Tab. VI. fig. 25.)

Subcylindricum, breve, viridum, metallicum; supra dense punctatum, subtus ocellato-punctatum et minutissime strigoso-rugosum; fronte transversim concava; pronoto stria integra, pone oculos compresso; elytris margine antico anguste lævi; pygidio infra valide concavo; prosterno basi inciso, triangulariter impresso; mesosterno stria marginali valide integra, lobo impresso; antennis pedibusque rufis; tibiis anticis 12- vel 13-, intermediis 8-, posticis 5-spinosis. Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

One example. The salient characters of this species are in the pro- and mesosternal plates. The base of the prosternum has a triangular impression; and the lobe of the mesosternum has a similar impression behind the stria, which causes the margin to stand out in relief. *T. festivum*, Lewis, has the prosternum constructed in the same way as in *T. impressisternum*; but the former is three times larger than the latter species.

3. **Teretriosoma immarginatum,** sp. n. (Tab. VII. fig. 1.)

Subcylindricum, breve, nigro-æneum, nitidum, undique dense punctatum; fronte transversim concava, in medio tuberculata; pronoto stria integra, pone oculos subfoveolato; elytris margine antico anguste brevi; pygidio supra concavo; prosterno haud striato, basi arcuatim inciso; mesosterno immarginato, grosse punctato; pedibus obscure brunneis; tibiis anticis 12- vel 13-, intermediis 8-, posticis 5-spinosis. Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

T. immarginatum is shorter and broader than *T. virens*, and may be known from all the described species by the large punctuation of the sternal plates, these latter being immarginate and without striæ. Dr. Horn's generic character "mesosternum with entire marginal line" only applies to some of the species now known. Unique.

4. **Teretriosoma conigerum,** sp. n. (Tab. VII. figg. 2, 2 *a*, *b*.)

Cylindricum, viridum, metallicum, supra sat dense et fortiter punctatum, subtus sparse ocellato-punctatum at minutissime strigoso-rugosum; fronte convexa; pronoto stria integra; elytris margine antico lævi, transversim impressis; pygidio in medio acute acuminato, infra valide concavo; prosterno tenue impresso, haud

striato; mesosterno antice semicirculari, angustissime marginato; antennis pedibusque rufis; tibiis anticis 7-, intermediis 5-spinosis. Long. vix 2 millim.

Hab. GUATEMALA, Aceytuno (*Champion*).

One specimen. This very remarkable species has the pygidium produced into a cone in the middle, from which point it is convex above and deeply concave or scooped out beneath. The structure of the pygidium somewhat approaches the form familiar to us in *Trypanæus*, with which *Teretriosoma* and *Teretrius* should doubtless be associated, although Marseul (Ann. Soc. Ent. Belg. xiii. 1870, pp. 61, 120) places *Trypanæus* between *Lioderma* and *Apobletes*, and *Teretrius* after *Saprinus*.

5. **Teretriosoma cavifrons,** sp. n. (Tab. VII. figg. 3, 3 *a*, *b*.)

Cylindricum, subelongatum, æneo-brunneum, nitidum; antennis pedibusque rufis; fronte grosse punctata, inter oculos prominula, in medio transversim sulcata, antice late et profunde excavata; pronoto antice minute, postice grosse, punctato, stria integra valida; elytris haud striatis; propygidio subocellato-punctato; prosterno haud striato, grosse et sparse punctato; mesosterno immarginato, a metasterno haud distincto; tibiis anticis extus 7-, intermediis 8-, posticis 5-dentatis. Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Colima city (*Höge*).

One example. This species shows in a very remarkable way the modifications to which the genus *Teretriosoma* is liable. Dr. Horn has remarked that the genus is intermediate between *Teretrius* and *Xiphonotus*, and in the present species there is on the forehead a similar projection to that on the thorax of *Xiphonotus chevrolati*, Mars. In some respects the frontal structure resembles that of a species of *Cis*. The thorax is punctured very much as in *T. virens*, the punctures being fine anteriorly, and gradually increasing in size towards the base.

6. **Teretriosoma paradoxum,** sp. n. (Tab. VII. figg. 4, 4 *a*.)

Cylindricum, æneum, metallicum, undique sat dense et fortiter punctulatum; antennis pedibusque rufis; fronte convexa, parum transversa; pronoto stria laterali sinuata, antice late interrupta, in medio fortiter tuberculato; pygidio grosse punctato, apice leviter impresso; prosterno robusto, prominulo, minutissime strigoso, truncato, antice parum concavo, haud striato; mesosterno antice acuminato, stria subintegra; pedibus anticis et intermediis 6-dentatis, posticis 3- vel 4-spinosis. Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Guanajuato (*Sallé*). One example.

This singular species is placed in *Teretriosoma*, owing to its colour and to the pygidium showing a slight tendency towards concavity at its apex. In general outline it corresponds with several species of *Cis*. The tubercle on the thorax is a very prominent specific character, and is unlike that of any other described Histerid. In *Xiphonotus* the thorax is produced in front on the same plane as the head, but in the present insect the thoracic tubercle is subvertical. The prosternum is very large, and anteriorly very prominent, with the apex somewhat abruptly concave. The marginal stria of the mesosternum is not very distinct, and is not apparently complete in front.

TERAPUS.

Terapus, Marseul, Monogr. in Ann. Soc. Ent. Fr. 1862, p. 680.

This remarkable genus contains a single species from Mexico. According to recent observations it is of formicarious habits.

1. **Terapus mniszechi.** (Tab. VII. fig. 5.)

Terapus mnizechi (sic), Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 682, t. 7. no. xlv. fig. 1[1].

Hab. Mexico (*coll. Mniszech* [1], *Flohr*), Jalapa (*Höge*).

One example has recently been received from Herr Höge.

ONTHOPHILUS.

Onthophilus, Leach, Zool. Miscell. iii. p. 76 (1817).

There are twenty species of this genus known at present—six from Europe, three from North America, three from Africa, seven from Asia, and one from Madagascar; but this can only be a small proportion of those existing in nature.

Most of its representatives are found in dung or decaying vegetable matter; the setose species from Asia and Africa occur under bark.

1. **Onthophilus flohri**, sp. n.

Ovatus, supra convexiusculus, niger, subopacus; antennis pedibusque piceis; fronte rugoso-punctata, antice triangulariter elevata, medio carinata; pronoto parum transverso, margine arcuato, elevato, dense et grosse strigoso, 6-costulato, costa externa brevi cæteris plus minusve abbreviatis; elytris 3-carinis validis, intervallis biseriatim punctatis; propygidio undique grosse punctato, in medio carinato, utrinque tuberculato; pygidio basi (minime profundo) bifoveolato, medio transversim et longitudinaliter elevato; prosterno mesosternoque grosse punctatis. Long. $2\frac{1}{2}$ millim.

Hab. Mexico, Durango (*Flohr*).

The distinctive characters of this species lie chiefly in the transverse thorax, the sides of which are evenly arched, in the short external thoracic costæ, and in the almost perfect oval outline. It is probably most nearly allied to *O. lecontei*, Horn, which is only known to us from description; but it also has some of the characters of *O. striatus* (Fabr.). From the latter it differs in the thoracic carinæ and in the elytral costæ, as well as in the sculpture of the propygidium and pygidium. The suture is very slightly elevated, and so also are the intermediate elytral striæ; in these respects it resembles the European *O. affinis*, Redt. The mesosternum is very slightly sinuous anteriorly.

A single example sent by Mr. Julius Flohr in 1887.

HOMALOPYGUS.

Homalopygus, Boheman, Kongl. Svenska Fregatt. Eugen. Resa, Zool. i. p. 36 (1858).

This genus was established upon a single species from the island of San José,

Bay of Panama; another is now added from Chiriqui; a third (*H. commensalis*, Lewis) is known from Blumenau, S. Brazil, and is said to have been found in the galleries made by Termites.

1. **Homalopygus latipes.**

Homalopygus latipes, Bohem. Kongl. Svenska Fregatt. Eugen. Resa, Zool. i. p. 37, t. 1. figg. 2 *a–d*[1]; Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 679[2], & 1861, t. 4. no. xliv. fig. 1.

Hab. British Honduras, R. Hondo (*Blancaneaux*); Panama, Island of San José [1] [2].

2. **Homalopygus æquatus,** sp. n. (Tab. VII. fig. 8.)

Oblongo-quadratus, subdepressus, nigro-piceus, nitidus; fronte plana, tenuiter et sparse punctulata, supra oculos striata; pronoto antice impresso, stria integra, sparse punctato, basi utrinque sulcato, margine reflexo; elytris margine anguste elevato, striis 1^a–3^m integris at elevatis, 4^a et 5^a basi arcuatim junctis; propygidio dense punctato, angulis posticis parum reflexis; pygidio punctulato, basi transversim impresso; prosterno lævi, bistriato; meso- metasternoque haud distinctis, stria marginali integra; tibiis anticis modice, intermediis et posticis validis, dilatatis, extus fortiter angulatis. Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

This insect is very distinct from the preceding; the more notable characters are the somewhat narrowed anterior angles of the thorax, rather shining propygidium, less transverse pygidium, and tibiæ less dilated and more angulated. One example.

CACHEXIA, gen. nov.

Corpus oblongum, antice paullo angustatum, subdepressum. Caput modice retractum, breve; fronte plana, clypeo subconvexo. Antennæ sub fronte insertæ; scapo magno, lato; clava oblonga; fossa antennali in prothoracis angulo excisa. Pronotum lævi, margine laterali elevato incrassato, bisulcatum, subtus excavatum, tibiis anticis receptis. Elytris basi sulcatis, striis nullis. Prosternum postice angustatum, antice latum, bistriatum, basi incisum. Mesosternum valide sinuatum, stria integra. Propygidium transversum; pygidium semicirculari declive, convexum. Pedes lati; tibiis depressis, valide ampliatis, haud denticulatis.

This new genus contains a single species from Nicaragua.

1. **Cachexia puberula,** sp. n. (Tab. VII. fig. 9.)

Oblongo-ovata, picea, subnitida, parum convexa; antennis pedibusque brunneis; fronte lævi, haud striata; pronoto in medio lævi, lateribus profunde sulcatis, margine incrassato elevato, tenuissime striato, stria antice arcuatim juncta; elytris griseo-pilosis, basi sulcatis, punctulatis; propygidio pygidioque convexis, dense pilosis; prosterno ante basin parum constricto, bistriato, striis antice conjunctis; mesosterno stria basi abbreviata; metasterno sparse et tenuiter punctulato; tibiis dilatatis, haud angulatis. Long. $3\frac{1}{4}$ millim.

Hab. Nicaragua, Chontales (*Janson*).

Two specimens. This remarkable insect agrees in some of its characters with *Homalopygus*; but in others it resembles *Plegaderus*, especially in the shape of the thorax and prosternal lobe.

PLEGADERUS.

Plegaderus, Erichson, in Klug's Jahrb. der Ins. 1834, p. 203.

Five or six species of this genus inhabit the New World, all probably from North or Central America, and nine are found in Europe; none have been discovered as yet in Africa, and the only Asiatic species is from Japan.

The different species are found beneath the bark or in the rotten wood of pine and other trees.

1. **Plegaderus monachus.**

Plegaderus monachus, Mars. Ann. Soc. Ent. Belg. xiii. p. 124 (1870)[1].

Hab. Guatemala, Balheu, San Joaquin, San Gerónimo (*Champion*).—? Brazil [1].

Found in abundance beneath the bark of pines by Mr. Champion in three different localities in Vera Paz; the original locality is doubtfully given as Brazil by Marseul [1], and is in all probability erroneous.

2. **Plegaderus comonforti.**

Plegaderus comonforti, Mars. Monogr. in Ann. Soc. Ent. Fr. 1862, p. 683[1], & 1861, t. 4. no. xlvi. fig. 1.

Hab. Mexico [1], San Andres (*Sallé*).

BACANIUS.

Bacanius, Leconte, Proc. Ac. Phil. vi. p. 291 (1853).

Bacanius does not contain nearly so many species as *Acritus.* It seems to be distributed much in the same way; and as the species are somewhat larger, it is possible a greater proportion of them have been found and described. The known forms are chiefly from Europe and North and South America. They are found under the bark of trees.

In this genus, as in *Acritus,* the scutellum is often small or inconspicuous.

1. **Bacanius scalptus,** sp. n. (Tab. VII. fig. 10.)

Ovalis, convexiusculus, rufus, subnitidus; fronte transversim sat grosse strigosa; oculis angulatis, prominulis; antennis flavis, scapo rufo; pronoto punctato, lateraliter strigoso; scutello inconspicuo; elytris strigoso-punctatis, stria 1ª integra, antice arcuatim continuata; pygidio grosse punctato; prosterno transverso, lobo lato, punctato et minute strigoso, laterali marginato; meso- metasternoque grosse punctatis; tibiis anticis arcuatis, multidentatis. Long. $\frac{3}{5}$ millim.

Hab. Guatemala, El Tumbador 2500 feet, El Reposo 800 feet, Zapote (*Champion*).—Antilles, Cuba (*coll. Lewis*).

For so small an insect the sculpture of the exoskeleton is remarkable for its coarseness. *B. scalptus* comes nearest to *B. tenuis,* Mars., of the described species; but there are others more closely approaching it in collections as yet unnamed. It has one elytral stria, which apparently corresponds with the first stria in other Histeridæ: this starts

from the apex of the elytron, and when near to the base turns towards the suture and disappears on the dorsal region by becoming confluent with the elytral strigosities.

2. **Bacanius ignobilis,** sp. n. (Tab. VII. fig. 11.)

Ovalis, convexus, brunneus, nitidus; antennis pedibusque rufis; pronoto ante scutellum fortius punctato; elytris sparse punctatis, punctis subaciculatis, striis obsoletis; pygidio tenuissime et sparse punctulato; prosterno subtriangulari, basi lato, stria integra, antice conjuncta; mesosterno antice semicirculari, stria marginali integra, stria postica recta, crenulata; metasterno sparse punctato. Long. 1 millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

In the form of the prosternum and its stria this insect is unlike any other known species. A single example.

3. **Bacanius hamatus,** sp. n. (Tab. VII. fig. 12.)

Ovalis, convexus, rufo-brunneus, nitidus; fronte grosse punctata, subtilissime rugosa; pronoto sparse punctato; scutello inconspicuo; elytris punctatis, stria suturali antice abbreviata, medio late hamiformis; prosterno lato, basi sinuato, punctato; mesosterno marginato grosse punctato, antice sinuato; pygidio sparse punctulato, apice sublævi; tibiis anticis in medio angulatis. Long. $1\frac{1}{4}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

This species may be placed near *B. misellus*, Lec., but it is as large as *B. rhombophorus*, Aubé. The peculiar shape of what may be termed the sutural stria will distinguish it from all the described species. The stria commences close to the suture at a quarter of the length of the elytra from the base, and at half the length it turns abruptly into the middle of the elytron. A single specimen.

4. **Bacanius mexicanus,** sp. n.

Ovalis, convexus, brunneus, nitidus; antennis pedibusque dilutioribus; fronte sublævi; pronoto sparse punctulato, stria marginali integra, linea punctorum basali transversa; scutello distincto; elytris striis obsoletis, disco postice sparse aciculatim punctulato; pygidio minute strigoso-rugoso; prosterno modice elongato, bistriato, sparse punctulato; mesosterno marginato, stria late interrupta, oblongorum punctorum serie transversa a metasterno distincta; metasterno punctulato. Long. 1 millim.

Hab. Mexico, Cordova (*Sallé*).

The chain-like stria before the scutellum forms in this insect almost a straight line, as shown in the figure of *Acritus strigosus*, Mars. (Monogr. in Ann. Soc. Ent. Fr. 1856, t. 14. no. xliii. fig. 19), but towards the outer edges of the thorax it becomes feeble and punctate. Unique.

ACRITUS.

Acritus, Leconte, Proc. Ac. Phil. vi. p. 288 (1853).
Æletes, Horn, Proc. Am. Phil. Soc. xiii. p. 356 (1873).

About sixty species of this genus are now described, but very many undetermined as yet exist in collections. The genus occurs in both hemispheres, and its species are

very numerous in the tropics as well as in the temperate zones. Ten are here enumerated from Central America.

They are chiefly found in decaying vegetable matter.

Æletes is a genus proposed by Dr. Horn to receive four species of *Acritus* which have the scutellum invisible above; but in all other respects *Acritus* and *Æletes* possess the same generic characters. Herr Joh. Schmidt [Berl. ent. Zeitschr. xxix. Heft ii. p. 325 (1885)] has adopted *Æletes* for two European species of *Acritus—atomarius*, Aubé, and *clarulus*, Reitter; but in the present arrangement it is not considered desirable to retain it. In *Acritus* the scutellum is always very minute, and varies relatively in size in different species, and is, as Dr. Horn observes (*l. c.* p. 352), "difficult to see from the very fine sutures between it and the adjacent parts." Marseul says of *Acritus atomarius*, Aubé (placed, as stated above, in *Æletes* by Schmidt), "Ecusson à peine visible;" so it seems best to reject a genus which rests not only on a single character, but on one which requires a high microscopic power for its observation, and is at times so obscure that authors express themselves differently as to its existence.

Dr. Horn's views, moreover, of the value of *Æletes* as a genus are much weakened by the fact that he does not always consider the presence or absence of a visible chitinous surface to the scutellum an important character in the Histeridæ. The genus *Carcinops* consists of about forty species, each with a distinct, and often large, scutellum, and *Paromalus* is composed of seventy species, in all of which the scutellum is superficially invisible; yet Dr. Horn, notwithstanding the difference of sculpture and general facies of these two genera, unites them (*l. c.* p. 307) without remark, and in his synoptic table we find at the commencement two species of *Paromalus*, then follow nine species of *Carcinops*, and at the end are two *Paromali*. A classification of this kind is too arbitrary to follow.

1. **Acritus substriatus.**

Acritus substriatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 602, t. 14. no. xliii. fig. 1[1].

Hab. Mexico (*Bilimek*); Guatemala[1], near the city, Capetillo, Balheu, Senahu (*Champion*).

Thirteen examples.

2. **Acritus hilum,** sp. n.

Oblongo-ovalis, convexiusculus, brunneus, nitidus, lævis; antennis pedibusque flavis; fronte concava, oculis prominulis; pronoto lateribus striato; elytris striis obsoletis; pygidio apice subtuberculato; prosterno bistriato, subquadrato, posterius angustiore; mesosterno utrinque sinuato, antice recto, stria interrupta. Long. $\frac{3}{4}$ millim.

Hab. Guatemala, Zapote (*Champion*).

In this species the line which represents the suture between the meso- and the metasternum is feeble and formed like an inverted arch. The apex of the pygidium has a small, yet well-defined, obtuse tubercle. One specimen.

3. **Acritus fuligineus,** sp. n.

Ovalis, convexiusculus, niger, nitidus; pedibus ferrugineis; antennis clava testacea; fronte plana, clypeo marginato; pronoto parce punctulato; elytris sat fortius punctulatis; pygidio lævi; scutello parum magno; prosterno anguste elongato, marginato, lateraliter arcuato; mesosterno antice semicirculari, stria integra, stria postica recta parum crenulata. Long. 1 millim.

Hab. GUATEMALA, Cerro Zunil 5000 feet (*Champion*).

The distinguishing character of this insect is the elongation of the prosternum, the latter being arched at the sides and rather wider in front than behind. A single specimen.

4. **Acritus peculiaris,** sp. n.

Orbicularis, convexiusculus, rufo-piceus, nitidus; fronte lata, æquali, parum dense punctulata; pronoto marginato, undique minutissime strigoso et vix dense punctulato, linea ante scutellum subrecta punctis aciculatis; scutello distincto; elytris striis obliquis, minute strigosis, vix dense longo-punctatis; prosterno subquadrato, marginato, dense punctato; mesosterno transverso et dense punctato, utrinque arcuato; metasterno undique punctulato, basi latissimo; pygidio subtilissime strigoso et parce punctulato. Long. $1\frac{1}{5}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

This small Histerid has not the usual facies of an *Acritus*, yet as there are but four joints in the hind tarsus (the essential character of *Acritus*) it is better to leave it in the present genus until more examples are found. Unique.

5. **Acritus bipartitus,** sp. n.

Ovatus, subconvexus, niger, nitidus; antennis pedibusque dilutioribus; capite pone oculos lævi, parce punctulato, inter oculos rugoso-punctulato; clypeo griseo-ciliato, antice obtuso, lato; pronoto parce punctulato, stria marginali integra, linea ante scutellum arcuata, in medio retrorsim acuminata; scutello inconspicuo; elytris striis obliquis; pygidio transverso, subtilissime punctulato; prosterno parallelo, marginato, sublævigato; mesosterno antice recto, stria interrupta, utrinque striato et sinuato; metasterno lævi. Long. 1 millim.

Hab. GUATEMALA, Balheu and San Gerónimo in Vera Paz (*Champion*).

The line on the base of the thorax is biarcuate from a point in front of the scutellum, a character which has not yet been noticed in any other species of the genus. Two specimens.

6. **Acritus quadristriatus,** sp. n. (Tab. VII. fig. 13.)

Ovalis, convexiusculus, brunneus, nitidus, undique punctulatus; antennis pedibusque rufis; capite transverso; pronoto marginato, linea basali e aciculato-punctis composita, subrecta; scutello magno; elytris striis obsoletis; pygidio sparse punctulato; prosterno subquadrato, utrinque bistriato, interstitiis latis, parce punctulatis; mesosterno antice arcuato, stria interrupta, postice serie punctorum recta a metasterno distincta. Long. 1 millim.

Hab. GUATEMALA, near the city (*Champion*).

The prosternum in this species is remarkable for being wider, though very slightly, than long, with two striæ on either side, separated from the lateral edge by a broad interstice. Under a high power the prosternum also exhibits a minute vermiform

sculpture between the punctures. The thorax has a basal line, nearly straight, composed of acicular punctures. One example.

7. **Acritus corpusculus,** sp. n.

Ovalis, convexiusculus, piceus, nitidus; antennis pedibusque pallidis; fronte convexa, punctulata; pronoto punctato, linea punctorum in medio late arcuata; scutello triangulari; elytris punctatis, striis obliquis, sutura elevata; pygidio subtiliter punctulato; prosterno punctato, striis marginalis validis, antice vix lato, postice quadrato; mesosterno antice recto, stria interrupta, punctato, linea (punctorum) transversali a metasterno distincta; metasterno undique punctato. Long. 1 millim.

Hab. GUATEMALA, near the city (*Champion*).

In this species the transverse thoracic line is simply but widely arched in the centre, a character not yet observed in other members of the genus. The form of the mesosternum is like that figured for *A. lateralis*, Mars. (Monogr. in Ann. Soc. Ent. Fr. 1856, t. 14, no. xliii. fig. 21): it is straight for the breadth of the prosternum and then inclines off somewhat obliquely. Nine examples.

8. **Acritus liliputianus,** sp. n. (Tab. VII. fig. 14.)

Ovalis, convexiusculus, flavo-brunneus, nitidus, lævis; antennis pedibusque pallidis; fronte convexa; pronoto marginato, sparse punctulato, linea catenulata, ante scutellum recta, utrinque basi approximata; scutello distincto; elytris medio subtiliter aciculatim rugosis, striis obsoletis; pygidio impunctato; prosterno lævi, marginato, lateraliter arcuato; mesosterno brevi, antice arcuato, in medio triangulariter impresso, stria antice tenui haud interrupta; metasterno impunctato. Long. $\frac{3}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Excellent distinguishing characters for this species lie in the triangular impression which occupies about a third of the surface of the mesosternum, and in the thoracic line being straight in front of the scutellum for the space of about half the breadth of the pronotum. The line indicating the limit of the mesosternum posteriorly is distinct, slightly sinuate, but otherwise the mesosternum is without sculpture. Five individuals.

9. **Acritus simpliciculus.**

Acritus simpliculus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 616, t. 14, no. xliii. fig. 15 [1].
Acritus simpliciculus (Mars.), Gemm. & Har. Cat. iii. p. 798.

Hab. PANAMA, Bugaba (*Champion*).—VENEZUELA, Caracas [1].

Four examples.

10. **Acritus gulliver.**

Acritus gulliver, Mars. Monogr. in Ann. Soc. Ent. Fr. 1856, p. 623, t. 14, no. xliii. fig. 23 [1].

Hab. GUATEMALA, Zapote (*Champion*).—ANTILLES, San Domingo [1].

A single specimen found by Mr. Champion in Guatemala is apparently referable to this species.

IDOLIA.

Idolia, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xvi. p. 214 (1885).

This genus was proposed for two species, one from Honduras and one from Brazil; two others are now added from Central America. The different species are found under the bark of trees.

1. **Idolia antennata,** sp. n. (Tab. VII. fig. 15.)

Orbiculato-globosa, nitida, supra lævis; antennæ clava magna; fronte plana, margine lateraliter anguste elevato; prosterno minutissime punctulato at transversim tenuissime strigoso, utrinque striato; mesosterno stria integra metasternoque undique punctulatis. Long. 2 millim.

Hab. GUATEMALA, El Tumbador 2500 feet (*Champion*).

This species is very similar to *I. gibba*, Lewis; but the club of the antenna is as large again, the entire surface beneath is finely punctulate, and the mesosternal stria is well-marked and complete. Two examples.

2. **Idolia scitula,** sp. n. (Tab. VII. fig. 16.)

Orbiculato-globosa, nigro-picea, nitida, supra lævis, antennis pedibusque dilutioribus; fronte margine utrinque elevato, antice immarginata, impressa; scutello triangulari, parum magno, lævi; prosterno lateraliter striato; mesosterno stria integra, tenuissima; metasterno crebre punctulato. Long. $2\frac{1}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

This species is larger than the preceding and has the frontal stria less widely interrupted. It is also broader, which makes the outline appear, when viewed from above, almost perfectly circular. Across the forehead there is a fine angular line, dividing the surface into two parts, the anterior portion of which is slightly depressed: this is a well-marked specific character. The mesosternal stria is complete, but extremely fine. One specimen.

3. **Idolia gibba.**

Idolia lævigata, Lewis, Ann. & Mag. Nat. Hist. 5th ser. xvi. p. 214 [1] (1885) (nec Payk.).
Idolia gibba, Lewis, Ent. Monthly Mag. xxiii. p. 64 (1886).

Hab. MEXICO, Tapachula in Chiapas (*Höge*); BRITISH HONDURAS, R. Sarstoon (*Blancaneaux*); GUATEMALA, Zapote (*Champion*); HONDURAS [1].

Five examples.

4. **Idolia lævigata.**

Hister lævigatus, Payk. Monogr. Hist. p. 84, t. 11. fig. 7 (1811) [1].
Tribalus lævigatus, Mars. Monogr. in Ann. Soc. Ent. Fr. 1855, p. 161, t. 9, no. xxxi. fig. 6 [2].
Cærosternus lævissimus, Lec. Proc. Ac. Phil. vi. p. 40 (1852) [3].

Hab. NORTH AMERICA [1].—MEXICO (*Sallé*), Yucatan [2]; BRITISH HONDURAS, Belize

(*Blancaneaux*); Guatemala, El Reposo, Chacoj (*Champion*).—Colombia, Cartagena [2]; Venezuela, Caracas [2]; Antilles, Cuba [2 3], San Domingo [2].

Ten examples.

Differences of opinion are expressed in the writings of entomologists as to the desirability of placing *Murmidius* and *Mychocerus* in a family by themselves; but as the species are few and somewhat obscure, it is thought best in this arrangement to leave them in the Histeridæ. Duval was the first to suggest the family Murmidiidæ and he has been followed by Dr. Horn. In the opinion of the present writer, the form of the antennæ and of the sternal plates (especially that of the prosternum) point to the Histeridæ as the most fitting associates of these singular genera.

MURMIDIUS.

Murmidius, Leach, Trans. Linn. Soc. xiii. p. 41 (1822); Jacquelin-Duval, Gen. Col. Eur. ii. p. 227, t. 56. fig. 276.

Ceutocerus, Germar, Ins. spec. nov. p. 85 (1824).

The members of this genus are at present limited to three: one (*M. ovalis*, Beck) is reputed to be cosmopolitan; the two others, as stated here, are of Central American origin.

1. **Murmidius irregularis.** (Tab. VIII. fig. 1.)

Murmidius irregularis, Reitt. Verh. zool.-bot. Ges. Wien, xxvii. p. 165 (1877)[1].

Hab. Mexico, Teapa [1]; Guatemala, El Tumbador (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

2. **Murmidius rectistriatus,** sp. n. (Tab. VIII. fig. 2.)

Ovalis, supra convexus, flavo-brunneus, nitidus, sparse hirsutus; pronoto lateribus marginato, angulis anticis obtusis; elytris punctorum seriatim impressis; pedibus flavis. Long. 1 millim.

Hab. Mexico.

A single example only, without more precise locality, has been sent to me by Herr E. Reitter. *M. rectistriatus* is smaller than *M. irregularis*, Reitter, and is much paler in colour: in the former the prosternal striæ are parallel to each other, and the mesosternal striæ are complete in front, leaving a narrow space as an anterior margin; in the latter the prosternal striæ are slightly divergent throughout their length and are hamate at their tips, and the mesosternal striæ terminate on each side at a point opposite the bases of the prosternal striæ, and there is therefore no anterior margin.

MYCHOCERUS.

Mychocerus, Erichson, Nat. Ins. Deutsch. iii. p. 292, nota (1845); Leconte (Zimmerman), Trans. Am. Ent. Soc. 1869, p. 255; Horn, Proc. Am. Phil. Soc. 1878, pp. 557, 592.
Murmidius, Leconte, Proc. Ac. Phil. 1866, p. 376 (pars).

Hitherto one species only has been assigned to this genus, a second is now added from Guatemala; the type of the genus (*M. depressus*, Leconte) was formerly placed in *Murmidius*. In the species now described the prosternum is nearly twice the width of that in any species of *Murmidius* known, and this is without doubt a valid generic character.

1. **Mychocerus pilifer**, sp. n. (Tab. VII. figg. 17, 18.)

Late ovatus, depressiusculus, brunneus, supra cinereo-pubescens, parce punctulatus; pronoto transverso, laterali arcuato, angulis anticis modice productis; elytris striis obsoletis, margine laterali anguste reflexo; subtus sublævi; prosterno lato, basi truncato, bistriato, striis anticis parum divergentibus; mesosterno antice recto, lateribus striato; pedibus testaceis. Long. $\frac{7}{8}$ millim.

Hab. GUATEMALA, El Reposo 800 feet (*Champion*).

Examples of this species have been submitted to Dr. Horn for examination and comparison with the North-American *M. depressus*, Lec.; and he states that *M. pilifer* is broader, and has the row of punctures on the elytra less distinct near the suture and scutellum, and that the thorax is more regularly narrowed from the base to the anterior angles. In *M. depressus* the thorax is more arcuate in front and the rows of punctures are more distinct and better marked on the dorsal region of the elytra. In *M. pilifer* the club of the antennæ is fuscous; in *M. depressus* it is pale and concolorous.

Seven examples, found beneath bark in the low hot region of the Pacific slope.

Fam. PHALACRIDÆ *.

This is one of the smaller families of Coleoptera: the volume of the Munich Catalogue of Coleoptera, published in 1868, included only eighty-one species of Phalacridæ, and the number described since that time is only about twelve, so that the total number of recognized species is at present less than 100.

From our region we have received nearly 400 specimens of the family, representing apparently about fifty species. The Phalącridæ are almost completely neglected by coleopterists, so that only those found in Europe and North America are tolerably well known; these amount to about sixty species, leaving only some thirty species as representing the family in other parts of the world. This is, however, not due to their absence from tropical regions, but rather to the fact that, being small and remarkably

* By D. SHARP.

unattractive and little varied insects, they are neglected by collectors. Not a single species has previously been recorded as found in Central America, and only two or three are known from South America: so that nothing can be said at present as to the geographical distribution of our genera and species.

The Phalacridæ are very difficult insects to describe, owing to their remarkable want of variety of form, and to the very slight sculpture of the upper surface. In order to distinguish the species we must therefore fall back on the minor structural characters. The genera hitherto recognized are only five in number *: four of the five occur in our region, and I have been compelled to add five others, based entirely on the structure of the central pieces of the sternum and the form of the hind tarsi. This latter character calls for a few explanatory remarks.

The tarsi are described by authors as five-jointed, but the fourth joint is so small, or so closely connected with the fifth, that it can rarely be detected; in *Phalacrus* and *Tolyphus*, indeed, the tarsi are not only practically tetramerous, but differ little in structure and clothing from the tetramerous tarsi seen in Erotylidæ and in Phytophagous Coleoptera generally. On the other hand, in some of our Central-American species the hind tarsi are found to be greatly modified, the metatarsus being very much elongated, laterally compressed, and the clothing of the under surface absent. On comparing these forms with elongate metatarsus together, it is seen that though at first sight similar, they exhibit really two quite distinct modifications—in one of them (*Litochrus*) the elongation of the metatarsus is due to the basal joint having become very elongate; but in the other the first joint remains quite short, or is so completely soldered to the base of the second joint that it can scarcely be detected, and in this case the tarsus presents the appearance of being composed of a very elongate metatarsus or basal joint, then a small joint, followed by a moderately long terminal or claw-joint. The genera *Eulitrus* and *Litolibrus* are those in which this pseudo-trimerous structure of the hind tarsi is best exhibited. The modification of the hind foot in this direction seems specially characteristic of our Central-American Phalacridæ, and several species that I have placed in *Olibrus* and *Eustilbus* exhibit it to a greater or less extent, and will probably be ultimately separated from the forms of those genera found in Europe and North America.

The structure of the pieces of the breast between the front and middle coxæ exhibits a similar series of modifications, but this modification does not go on *pari passu* with that of the hind tarsus. In *Eulitrus*, the most interesting of the Central-American genera, and one which has a highly modified tarsus, the modification of the middle of the metasternum is extreme; but in *Litolibrus*, which has the tarsus nearly as much modified as *Eulitrus*, the breast is but little developed.

With these explanations the genera I have proposed will, I think, be better under-

* *Augasmus*, Motsch., is another genus, but the characters given are too indefinite to allow it to be more than guessed at.

stood than by representing them in tabular form; indeed I do not feel at all certain whether the modifications of the tarsus or of the breast should be treated as of superior value for taxonomical purposes. I incline to the opinion that the distinctions of the tarsus may prove to be of predominant importance, but they are very difficult to follow in a satisfactory manner without the aid of microscopical preparations, and the material we have received is insufficient for this purpose. Hence I feel very doubtful as to the correct generic position of some of the species I have described, especially those I have placed in *Eustilbus*.

The species of Phalacridæ are usually found upon flowers or low plants.

PHALACRUS.

Phalacrus, Paykull, Fauna Suecica, iii. p. 438 (1798) (pars); Erichson, Nat. Ins. Deutsch. iii. p. 109.

This is one of the most widely distributed genera of the family, and consists at present of about thirty species from various parts of the world. The representatives found in our region are in all probability really congeneric with those of Europe and North America.

1. **Phalacrus ovalis.**

Phalacrus ovalis, Lec. Proc. Ac. Phil. 1856, p. 15 [1].

Hab. NORTH AMERICA, California [1], Arizona (*Morrison*).—MEXICO, Northern Sonora (*Morrison*), Saltillo in Coahuila (*Dr. Palmer*), Guanajuato, Orizaba (*Sallé*); GUATEMALA, near the city (*Champion*).

Extremely similar to the European *P. corruscus*, but with very differently formed antennæ. I possess some specimens named by Morrison and confirmed by Dr. Horn, but nevertheless am not sure that they are really Leconte's species. From the localities other than Sonora we have a very poor supply of examples, only indeed either one or two specimens from each; these latter do not exactly agree with one another, and it may be that not all, or indeed any, of them are actually conspecific with the examples from Sonora.

2. **Phalacrus rufipes,** sp. n.

Breviter ovalis, convexus, niger, minus nitidus, pedibus rufis, antennis flavis.
Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Of short form, scarcely narrower behind. Antennæ yellow, the terminal joint of the club elongate. Head feebly punctate. Thorax large, not margined at the base in the middle. Elytra dull, with well-marked sutural stria, and extremely minute serial punctures. Sides of the thorax and the apex of the elytra picescent. Legs, including the front coxæ, red; under surface piceous. Two specimens.

3. **Phalacrus obscurus,** sp. n.

Ovalis, convexus, niger, minus nitidus, pedibus piceis, antennis rufis, clava obscuriore.
Long. 3 millim.

Hab. Mexico, Saltillo in Coahuila (*Dr. Palmer*), Santa Clara in Chihuahua, Mexico city, Acapulco (*Höge*), Guanajuato (*Sallé*), Cuernavaca (*Höge, H. H. Smith*).

This is very closely allied to *P. rufipes*, but is larger, and has darker legs and antennæ, and the thorax has the scutellar lobe distinctly margined behind. Eight specimens. The typical examples have the mandibles porrect and largely exposed; but I include also in the species some specimens in which the mandibles are entirely concealed beneath the clypeus, as it is possible this distinction may be merely sexual.

4. **Phalacrus germanus,** sp. n.

Breviter ovalis, minus convexus, niger, minus nitidus, pedibus piceis, antennis testaceis, clava obscuriore.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Quezaltenango 7800 feet (*Champion*).

Closely allied to *P. rufipes* and *P. obscurus*, but less convex than either of them. The thorax is not margined at the base. The form of the antennæ is similar to that of the two allied species.

5. **Phalacrus flavicornis,** sp. n.

Breviter ovalis, minus convexus, niger, minus nitidus, antennis flavis, pedibus piceis, tibiis tarsisque testaceis.
Long. 2 millim.

Hab. Guatemala, Capetillo (*Champion*).

This is much smaller than *P. rufipes*; it is also less convex and has the femora dark, and the club of the antenna is more slender, so that I consider it distinct, though I have seen only one specimen.

6. **Phalacrus scutellaris,** sp. n. (Tab. VII. fig. 19.)

Breviter ovalis, latus, minus convexus, rufus, antennis pedibusque rufo-testaceis, thorace piceo, latera versus dilutiore, elytris plaga scutellari aliaque laterali nigricantibus.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

Antennæ clear, pallid red; club elongate, the terminal joint quite twice as long as the tenth. Thorax picescent in the centre, more dilute towards the sides, with a very broad short basal lobe in the middle, which is not at all margined behind. Elytra red, the scutellum and a large patch round it, and an elongate vitta within the lateral margin, black; there is no sutural stria, and the sculpture is obsolete, but consists of numerous punctures, transverse rather than round in form, placed on the posterior part.

Four examples were obtained of this very distinct species.

7. **Phalacrus lucidus,** sp. n.

Breviter ovalis, latus, minus convexus, dilute rufus, antennis pedibusque testaceis.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Closely allied to *P. scutellaris*, though easily distinguished from it by the colour and smaller size. The club of the antenna is of the same peculiar shape as, though much shorter than, it is in *P. scutellaris*, that is to say, the increase in size of the terminal joints is chiefly on one side of the mesial line. Unique.

OLIBRUS.

Olibrus, Erichson, Nat. Ins. Deutsch. iii. p. 113 (1848).

This is the most extensive of the genera of Phalacridæ, and comprises forty or fifty known species, which represent quite one half of the family. It is widely distributed, having been recorded from various parts of the eastern hemisphere, and being well represented in North America; from South America only one species has as yet been recorded. A portion of the species placed in the genus must, however, be separated, as Erichson included *Eustilbus* in it.

Our representatives differ somewhat in their structural details from one another and from the European species, but I have not found it necessary to divide them into more than one genus on this account.

1. **Olibrus guatemalenus,** sp. n.

Testaceus, supra niger, vix subænescens, breviter ovalis, convexus; elytris seriatim subtiliter punctatis, interstitiis obsoletissime punctulatis.
Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Zapote, San Gerónimo, Cahabon, Chiacam (*Champion*); PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ yellow; club rather large, its terminal joint rather short. Thorax distinctly and completely margined at the base, scarcely lobed in the middle. Scutellum quite small. Elytra with distinct and quite regular series of fine punctures extending almost to the base, the interstices indistinctly punctured.

We have received a small series of this species, including a pair from the State of Panama. The upper surface is sometimes piceous rather than black.

2. **Olibrus vulgaris,** sp. n.

Rotundato-ovalis, sat convexus, nitidus, rufescens, supra dilute piceus, antennis pedibusque testaceis; elytris seriatim subtilissime punctatis.
Long. 2 millim.

Hab. GUATEMALA, Chacoj and Chiacam in Vera Paz (*Champion*).

Shorter in form, of a more delicate colour, and with less evident punctuation on the elytra than *O. guatemalenus*, and, in addition, with considerably broader hind tibiæ and larger club to the antennæ. The last joint of the antennæ is about twice as long as that preceding it. The hind margin of the thorax, though fine, is quite distinct. The serial punctures on the wing-cases, though very fine, extend forwards nearly to the base; the interstitial punctures can scarcely be detected. Four examples.

3. **Olibrus rubiginosus,** sp. n.

Breviter ovalis, convexus, rufo-testaceus, elytris subtiliter seriatim punctatis; antennis articulo ultimo minus elongato, apice oblique truncato, subemarginato.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, San Gerónimo (*Champion*).

A distinct species, with the middle of the metasternum closely and coarsely punctate, and with short hind tarsi; the metasternal prominence is nearly the same as in *O. guatemalenus*. The second joint of the hind tarsus is not greatly longer than the first, and the articulation between the two is very distinct; the tibial spurs are small. The thorax is finely margined at the base and feebly lobed in the middle. The sutural stria is deep and extends nearly to the base, and the fine punctures forming the series on the wing-cases are quite definite and distinct, as in *O. guatemalenus*.

4. **Olibrus teapensis,** sp. n.

Ovalis, convexus, nitidus, rufo-testaceus, supra fusco-niger; elytris in disco subtiliter seriatim punctatis; antennis pedibusque testaceis, illis clava sat elongata.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Antennæ with long but rather stout and loosely-jointed club. Thorax rather strongly lobed at the base in the middle, and there strongly margined, the sides of the base quite unmargined. Elytra with series of fine punctures, quite indistinct at the base and behind, and with an extremely obsolete diffuse punctuation. Prosternum rather narrow between the coxæ, bent upwards immediately behind the coxæ. Mesosternum forming a rather large band in front of the metasternum between the middle coxæ. The articulation between the basal and second joints of the hind feet quite distinct, the second joint not twice as long as the first. Four specimens, captured in January 1888.

This species, which in appearance is a quite ordinary *Olibrus*, is aberrant, inasmuch as the mesosternum is more largely exposed in front of the metasternum than usual.

5. **Olibrus mexicanus,** sp. n.

Breviter ovalis, sat convexus, piceus, antennis pedibusque testaceis, supra limbo dilutiore apice sæpe testaceo; sublævigatus, elytris stria suturali.

Long. $2\frac{1}{3}$ millim.

Hab. Mexico, Jalapa (*Höge*), Teapa (*H. H. Smith*); British Honduras (*Blancaneaux*); Guatemala, Dueñas (*Champion*).

Antennæ clear yellow, the club rather slender. Thorax feebly lobed, margined only along the lobe. Elytra with obscure silky texture of the surface, without distinct punctuation, but with very obsolete subtransverse punctures presenting a somewhat serial arrangement.

The prosternum is rather flat, somewhat large, very shining; the metasternum very prominent in front, strongly margined, and the angles of the margin rounded. The basal joint of the hind tarsus is very short, the second joint three times as long as the first.

This species is rather smaller than *O. guatemalenus*, and is well distinguished by the somewhat different structure of the breast; on the upper surface the absence of distinct serial punctures and of a basal margin to the thorax are the best characters for distinguishing it. We have received fifteen examples from Mexico, and one each from British Honduras and Guatemala.

6. **Olibrus partitus,** sp. n.

Ovalis, minus convexus, piceo-testaceus, supra piceus, antennis, pedibus elytrorumque dimidio posteriore testaceis.

Long. 2 millim.

Hab. Guatemala, Chiacam, Lanquin (*Champion*).

Antennæ clear yellow, with a slender club. Thorax margined at the base in the middle. Elytra with elongate sutural stria, but almost destitute of other sculpture. Legs slender.

This distinct little *Olibrus* varies somewhat in depth of colour like many of its congeners.

7. **Olibrus posticalis,** sp. n.

Breviter ovalis, sat convexus, rufo-testaceus, supra piceus, elytris apicem versus dilutioribus; illis stria suturali seriebusque abbreviatis punctorum minus subtilibus.

Long. $1\frac{1}{2}$ millim.

Hab. Guatemala, Champerico (*Champion*).

Var. Elytrorum punctis seriatis plus minusve obsoletescentibus.

Hab. Mexico, Cordova (*Sallé*), San Juan Bautista in Tabasco (*Höge*), Teapa, Atoyac (*H. H. Smith*).

A very small insect, and apparently an *Olibrus*, but possessing an unusually broad scutellum, and remarkable also on account of the distinct serial punctures. The sutural stria becomes in front a series of quite evident punctures, not, however, quite attaining the base, and outside this there are two or three other series of punc-

tures, still more abbreviated both at the base and apex. Two specimens only in bad condition have been received from Guatemala.

The small series of Mexican examples has been forwarded to me since the above description was made; none of these specimens have the sculpture so well developed as the typical examples from Guatemala.

8. **Olibrus porrectus,** sp. n.

Rotundato-ovalis, sat convexus, sat nitidus, testaceus, supra fusco-piceus; elytris stria suturali impressa.
Long. $1\frac{1}{4}$–2 millim.

Hab. MEXICO, Atoyac, Teapa (*H. H. Smith*), Orizaba (*H. H. Smith & F. D. Godman*); BRITISH HONDURAS, R. Hondo, Belize (*Blancaneaux*); GUATEMALA, near the city, Dueñas, Calderas, Senahu, Tamahu, San Juan in Vera Paz (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ yellow, with slender elongate club. Thorax not margined at the base in the middle. Elytra with a sutural stria extending about halfway to the base, almost destitute of traces of striation or punctuation.

I have great doubts whether this obscure little insect should be placed in *Olibrus*, the metasternum being more prominent than usual, and the basal joint of the hind foot very short; but it is perhaps better not to separate it on these characters at present. *O. porrectus* bears a very great resemblance to *O. mexicanus*, but is a good deal smaller, and has the thorax more obsoletely margined at the base in the middle. I see no other characters by which the two can be distinguished when the upper surface is looked at; but beneath the metasternum is a little different, and the spurs of the hind tibiæ are quite minute in *O. porrectus*, and larger in *O. mexicanus*.

This unattractive insect is probably the commonest, as it is also apparently the most generally distributed, of the Phalacridæ of our region. It varies greatly in size and also in the depth of coloration of the upper surface, but I can find no satisfactory signs of there being more than one species; the specific characters are, however, so slight in this family of beetles that it may prove otherwise when better series of examples are obtained. The larger number of our specimens were procured in British Honduras, and amongst these all the varieties in size are illustrated.

9. **Olibrus submaculatus,** sp. n.

Rotundato-ovalis, sat convexus, rufo-testaceus, supra piceo-rufus, antennis, pedibus elytrorumque maculis magnis vagis quatuor, testaceis.
Long. 2 millim.

Hab. MEXICO, Jalapa, Acapulco (*Höge*), Teapa (*H. H. Smith*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Rio Maria Linda (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ with slender club. Thorax obscure red, margined at the base in the middle. Elytra with well-marked sutural stria, and only extremely faint traces of other sculpture; with an ill-defined pale spot near each shoulder, and a larger spot near the apex, scarcely separated from its fellow of the opposite side. We have received but one specimen from each locality. Those from British Honduras and Guatemala are typical; those from Mexico and Nicaragua agree with one another, but are a variety, or distinct species, of narrower form, with the spots very nearly obsolete.

10. **Olibrus substrigosus,** sp. n.

Rotundato-ovalis, sat convexus, testaceo-luridus, nitidus, elytris stria suturali posteriusque strigulis transversis, obsoletis.
Long. 2 millim.

Hab. GUATEMALA, El Tumbador, Cerro Zunil (*Champion*).

This species differs from *O. porrectus* in being rather broader and less convex in form, of a lurid yellow colour, and in the elytra being provided with an obsolete sculpture of short strigæ. We have only two examples in bad preservation.

11. **Olibrus atomarius,** sp. n.

Ovalis, convexus, piceus, supra niger, nitidus, antennis pedibusque testaceis; lævigatus, elytris stria suturali fere nulla.
Long. 1 millim.

Hab. PANAMA, Bugaba (*Champion*).

This minute insect is smaller than the smallest varieties of *O. porrectus*, and likewise of narrower form; it is very similar to that species, but has a good distinctive character, inasmuch as the sutural stria can scarcely be detected, even at the extremity of the elytra. The upper surface has no sculpture; and the antennæ are slender, with compact and elongate club, and yellow in colour.

The four examples received are quite similar to one another. *O. atomarius* is one of the smallest Phalacridæ yet discovered.

12. **Olibrus microsternus,** sp. n.

Subhemisphæricus, testaceus, fere lævigatus; antennarum clava crassa.
Long. $1\frac{2}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ short, with thick club, the penultimate joint rather strongly transverse, the terminal joint rather short. Thorax short. Elytra with very indistinct sutural stria, and with obscure series of extremely minute punctures.

This little *Olibrus* is remarkable on account of the very minute prosternal process, the middle coxæ being, however, widely separated; these characters, in conjunction

with the thick club of the antennæ, will facilitate its recognition. We have received only one example.

13. **Olibrus latipes,** sp. n.

Rotundato-ovalis, valde convexus, nitidus, rufo-testaceus, antennis pedibusque testaceis; antennarum clava lata; pedibus latioribus.

Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ short, with very broad club, the penultimate joint strongly transverse. Thorax finely margined at the base. Elytra with a sutural stria, and distinct series of fine punctures.

This species agrees with *O. microsternus* not only in its unusually broad antennal club, but also in the narrowly separated front coxæ, in strong contrast to the widely separated middle pair; but *O. latipes* is remarkably distinct by its broad legs, the tibiæ being unusually broad, and the femora very broad, suggesting an affinity with *Litolibrus*. The insect has an appearance very similar to that of some of the smaller Anisotomidæ—such as *Cyrtusa*—and probably when it can be thoroughly examined will prove to be of a distinct genus. We have received only one specimen.

EUSTILBUS.

Olibrus, Sect. **, Erichson, Nat. Ins. Deutsch. iii. p. 120 (1848).
Olistherus, Seidlitz, Fauna Baltica, p. 157 (1872) (nomen præocc.).
Stilbus, Seidlitz, loc. cit. p. 35.

The separation of these insects from *Olibrus* by Seidlitz was, I think, an improvement. Unfortunately the name he adopted was in use in Coleoptera, and he therefore changed it to *Stilbus*; but as *Stilbum* is in use in Hymenoptera, and as the two names are not sufficiently distinct—the two, indeed, being actually the same in several parts of their declensions—it is desirable to make a change before Seidlitz's name comes into general use.

Eustilbus occurs in Europe and North America, but I can give no information as to whether any of the species described as *Olibrus* from other parts of the world should be referred to it. *Eustilbus apicalis* appears to be sufficiently congeneric with the European forms of the genus, but I doubt whether some other of the species I ascribe to *Eustilbus* can ultimately remain in it, the elongation of the second, and the abbreviation of the first, joint of the hind feet being extreme in *E. distinctus*.

1. **Eustilbus apicalis.**

Phalacrus apicalis, Melsh. Proc. Ac. Phil. ii. p. 102.
Olibrus apicalis, Lec. Proc. Ac. Phil. 1856, p. 17.

Hab. NORTH AMERICA, North Carolina, Arizona (*Morrison*).—MEXICO, Northern

Sonora (*Morrison*), Saltillo in Coahuila (*Dr. Palmer*), Guanajuato, Cordova (*Sallé*), Mexico city, Amecameca in Morelos (*Höge*).

Variable in depth of colour, the anterior parts being sometimes black and then forming a strong contrast with the pale extremity; the sides of the thorax and front of the head always more or less dilute. Antennæ clear yellow, with slender and elongate club. Thorax scarcely lobed in front of the scutellum, and there feebly margined. Elytra without any trace of punctuation; besides the sutural stria there may be detected traces of other striæ, but excessively fine and only to be seen in certain lights; the surface is extremely shining.

This is probably the *Olibrus consimilis* of the North-American list of Coleoptera, at least I have received it under that name from Morrison in a series of species that was also submitted to Dr. Horn for verification. Whether this be the case or not, it is, I think, distinct from the European insect bearing the name referred to.

2. **Eustilbus distinctus,** sp. n.

Ovalis, minus convexus, nitidus, rufus, antennis pedibusque testaceis; elytris seriatim sat fortiter punctatis.
Long. $2\frac{1}{4}$–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, Panzos, Paso Antonio (*Champion*).

Antennæ pale yellow; club elongate, but rather slender. Thorax large, with feeble basal lobe. Scutellum rather broad and short. Elytra with series of rather large punctures, which are finer and more obsolete on the apical part.

A very distinct species of more elongate form than usual, and remarkable by the punctures being more conspicuous on the basal than they are on the apical part of the wing-cases; I am very doubtful as to its generic position. We have received only three examples; it appears to be more variable in size than any other of our species.

3. **Eustilbus gracilis,** sp. n.

Ovalis, minus convexus, nitidus, rufus, antennis pedibusque testaceis; elytrorum disco seriatim sat subtiliter punctato.
Long. 2 millim.

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, Zapote (*Champion*).

Very closely allied to *E. distinctus*, but smaller, with the punctures of the series on the elytra more minute, and with some punctuation on the interstices, this latter being quite absent in *E. distinctus*. We have received only three specimens of the species.

4. **Eustilbus mollis,** sp. n. (Tab. VII. fig. 20.)

Breviter ovalis, convexus, pallide testaceus, nitidus, elytris pone medium fascia obsoleta, angulata, fusca.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

Readily distinguished by the pallid colour and the angulate fascia behind the middle of the wing-cases. There is a sutural stria and faint indications of other striæ on the elytra, but no punctuation whatever. The antennæ are slender, with elongate club. Two examples.

5. **Eustilbus placidus,** sp. n.

Rotundato-ovalis, testaceo-brunneus, antennis pedibusque testaceis; lævigatus, elytris stria subtilissime posterius impressa.
Long. 2 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

This species is without trace of sculpture on the elytra, and the sutural stria is very fine and near to the suture, and only visible on the declivous apical part. The form is more rotund than in our other species of *Eustilbus*. The antennæ have a rather broad club; and the scutellum is quite small. Two examples, found in February 1888.

6. **Eustilbus æqualis,** sp. n.

Ovalis, valde convexus, testaceo-ferrugineus, nitidus, fere lævigatus; elytris stria suturali abbreviata.
Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, near the city, San Gerónimo (*Champion*).

Antennæ short, but with rather elongate club. Thorax truncate at the base in the middle, and not margined. Elytra a good deal narrowed behind, very shining, their sutural stria placed very near the suture and not extending far forwards.

Seven examples. In this minute *Eustilbus* the setæ on the prosternal process, though very fine, are remarkably elongate.

LIOPHALACRUS, gen. nov.

Corpus hemisphæricum. Tarsi posteriores minus elongati, articulo primo brevi, secundo elongato. Tibiæ minute calcaratæ. Pedes intermedii late distantes; metasternum inter hos haud marginatum; mesosternum conspicuum; prosternum apice minute setosum.

A not very distinct genus; allied by the structure of the breast to *Eustilbus*, but by the hind tarsi nearer to *Litolibrus*, and indeed in this latter respect forming a connecting-link between *Olibrus* and *Litolibrus*. The basal joint of the hind tarsus is short, and not very closely connected with the second joint, though no motion appears to be possible between them; the second joint is more than twice as long as the first. The metasternal process is very broad, and the mesosternum forms in front of it a piece of more than usual size, the two being separated by an extremely fine raised margin.

1. **Liophalacrus bicolor,** sp. n. (Tab. VII. fig. 21.)

Hemisphæricus, nitidus, lævigatus, testaceus, supra niger; elytris dimidio basali rufo, apicem versus stria suturali subtili; antennis articulis nono et decimo nigris.
Long. 2 millim.

Hab. PANAMA, Bugaba 1000 feet (*Champion*).

Antennæ with the terminal joint paler than the penultimate two, and about equal to them in length. Thorax with a short broad median lobe, which is feebly margined behind. Scutellum small. Elytra with the basal half red, the apical half black; impunctate and estriate, but with a fine and short sutural stria on the apical portion.

A small series of eight examples was found of this easily recognized insect.

2. **Liophalacrus rotundus,** sp. n.

Hemisphæricus, nitidus, lævigatus, fusco-testaceus, supra niger, elytris versus basin macula vaga rufa striaque suturali munitis; antennis ante apicem nigris.
Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Antennæ with elongate club, the terminal joint long. Thorax with a well-marked median lobe. Elytra almost destitute of any traces of punctures, but with a well-defined sutural stria extending halfway to the base. Unique.

Allied to *L. bicolor*, but larger, with longer club to the antennæ, the red area on the elytra smaller, and the sutural stria more elongate.

3. **Liophalacrus** (?) —— ?

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

A single mutilated example much resembling such examples of *Olibrus porrectus* as are quite black, but apparently belonging to *Liophalacrus*.

ACYLOMUS, gen. nov.

Tarsi posteriores articulo primo brevi cum secundo consolidato, hoc elongato, tertio parvo. Prosternum latum, apice setis rigidis armatum. Metasternum inter coxas intermedias latum, longe productum, anterius truncatum, haud rotundatum.

The form is here short, as is usual in *Phalacrus*; but the genus is allied to *Eustilbus*, from which it differs by the first and second joints of the hind tarsus being quite consolidated, and the second of them greatly elongated, by the metasternum being very prominent, and the mesosternum in front of it reduced to a mere margin. The suture between the first and second joints of the hind foot is not easily seen, but occurs at about the line of the tibial ciliæ, the basal joint being only about one third of the length of the following joint; the third joint and the terminal joint are about equal in length. The spurs of the tibiæ are moderately long. The hind femora are very broad.

1. **Acylomus aciculatus,** sp. n. (Tab. VII. fig. 22.)

Subrotundatus, sat convexus, nitidus, piceus; elytris stria suturali punctisque transversis obsoletis; antennis pedibusque rufis.
Long. $2\frac{1}{2}$–3 millim.

Hab. MEXICO, Jalapa (*Höge*), Teapa (*H. H. Smith*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); NICARAGUA, Chontales (*Janson*).

Antennæ with rather slender and compact club; ninth joint longer than broad; tenth broader than long; terminal joint about as long as the two preceding together. Thorax with short but well-marked scutellar lobe, and the base at this part margined. Scutellum rather small. Elytra with a very flat basal margin, a well-marked sutural stria, which, however, does not quite extend to the base, and peculiar obsolete punctures, which look in a certain light as if they were feeble transverse impressions.

We have received about a dozen examples from British Honduras, two from Nicaragua, and two from Mexico; those from the latter locality are in a bad state of preservation and are a variety of very small size.

2. **Acylomus ——?**

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This and the following two species are very much smaller than *A. aciculatus*; as each is represented by only a single mutilated example, and possesses apparently no very salient characters, I have preferred not to give them names.

3. **Acylomus ——?**

Hab. GUATEMALA, near the city (*Champion*).

4. **Acylomus ——?**

Hab. GUATEMALA, Cahabon in Vera Paz (*Champion*).

EULITRUS, gen. nov.

Tarsi posteriores articulo primo brevi, cum secundo consolidato, hoc elongato, tertio parvo. Prosternum muticum, apice reflexo. Metasternum inter coxas intermedias latum, valde productum, anterius omnino rotundatum.

Although agreeing with *Acylomus* in the structure of the hind feet, this genus departs very widely therefrom in the structure of the breast, and is, in fact, the most highly developed of the forms with very prominent metasternum. The front of the metasternum actually projects forwards and reposes on the prosternal process, which is impressed for its reception. As regards the structure of the hind foot, although the short basal joint appears to be quite consolidated with the elongate second joint, yet on the under surface there remain some minute adpressed ciliæ that make the line of

articulation undoubtedly evident. The species are, moreover, peculiar in the elytra having no trace of even a sutural stria.

The elongate metatarsus is very remarkable, it being six times as long as the apparent second (truly third) joint. The elongation of this part of the foot renders it possible that the species might be referred to *Litochrus*; but if the long metatarsus be considered as one joint, there is then a joint less in the foot than there is in *Litochrus*, so that the two genera are very distinct, though the structure of the breast is similar in both.

1. **Eulitrus estriatus,** sp. n. (Tab. VII. fig. 23.)

Ovalis, sat convexus, piceus, supra nigerrimus; elytris estriatis, punctis irregularibus, subobsoletis, subtransversis, anterius desinentibus.
Long. vix 4 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

Antennæ dark red, thick; club broad, loosely articulated, the terminal joint but little longer than the tenth, obtuse. Head very broad. Thorax with a short lobe in front of the scutellum, but not margined. Scutellum small. Elytra without distinct basal margin.

Four examples of this species have been received, three of them in a very mutilated condition.

2. **Eulitrus anisotomus,** sp. n.

Ovalis, piceus, nitidus, antennis pedibusque testaceis; elytris rufis, marginibus nigris, punctis subtransversis obsoletis.
Long. $2\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, R. Hondo (*Blancaneaux*).

This insect resembles *Acylomus aciculatus*, with which it cannot be confounded, however, if the absence of a sutural stria be noticed.

From *Eulitrus estriatus* it differs by the smaller size and the more dilute colour.

LITOLIBRUS, gen. nov.

Corpus hemisphæricum. Prosternum parvum, muticum. Metasternum parum prominens, inter coxas haud productum. Tarsi posteriores elongati, articulo primo brevi, secundo valde elongato, cum primo oblique articulato et consolidato.

This genus has the tarsi formed much as in *Eulitrus*; but the metasternum is very different, and in this respect the genus is one of the lower forms of the family, *Eulitrus* being at the other extremity.

Litolibrus contains the most remarkable Phalacrids yet discovered, and some of the species are beautifully coloured, but these are apparently all very rare. Although the

species are numerous in our region I am not acquainted with any belonging to it from other parts of the world, and it is probable it may prove to be peculiar to Tropical America.

1. **Litolibrus obesus,** sp. n. (Tab. VII. fig. 24.)

Hemisphæricus, nitidus, testaceus; elytris plus minusve rufo-tinctis, stria suturali seriebusque subtilibus punctorum, et stria et punctis anterius desinentibus; antennarum clava elongata.
Long. 4–5 millim.

Hab. Guatemala, El Tumbador, Las Mercedes, Cerro Zunil, San Isidro, Mirandilla, Sinanja, Chacoj (*Champion*); Panama, Bugaba, Volcan de Chiriqui below 4000 feet (*Champion*).

Eyes very large. Penultimate two joints of antenna each about as broad as long, the terminal joint nearly twice as long as wide. Thorax very broad, faintly lobed in the middle, with the base very finely margined. Scutellum moderately large, about as long as broad. Elytra with broad flat basal margin.

The elytra in this species are iridescent in certain lights, and in some specimens are red, in others similar in colour to the thorax.

In Guatemala only single examples were procured in each of the above localities; in the State of Panama the insect was obtained in moderate numbers, but the specimens are unfortunately very much decayed.

2. **Litolibrus cinctus,** sp. n.

Hemisphæricus, testaceus; elytris rufis, nigro-cingulatis; prothorace nigro, utrinque macula magna testacea.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Terminal joint of antenna more than twice as long as the tenth. Elytra externally with a black band, this band connected with the black colour on the thorax so that a large discoidal red space is enclosed by a black girdle. Scutellum black. Extreme hind margin of the elytra yellow; punctuation obliterated, except behind, and there very indistinct.

This species by its colour recalls certain forms of Coccinellidæ; it is, however, similar in structure to *L. obesus*. Eight examples were procured, but they are unfortunately in a very mutilated condition.

3. **Litolibrus rufipennis,** sp. n.

Hemisphæricus, testaceus, elytris rufis, capite prothoraceque fuscis limbo dilutiore.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Except in colour, this species seems very close to *L. cinctus*. The elytra are red,

with iridescent reflections, and with fine series of punctures behind; the scutellum is concolorous with them. The head and thorax are piceous, the former becoming yellow in front, the latter at the sides.

4. **Litolibrus quadratus,** sp. n. (Tab. VII. fig. 25.)

Hemisphæricus, rufo-testaceus, nitidus, antennis pedibusque testaceis; elytris nigris, limbo maculisque quatuor discoidalibus, quadratim positis, rufo-testaceis.
Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, Panzos in Vera Paz (*Champion*).

A species of very convex form and almost circular outline, and with highly polished surface. The elytra have four yellow spots placed so as to mark the position of a square on the discoidal portion; and bear a well-marked series of fine punctures not extending to the base.

We have received only one specimen.

5. **Litolibrus signatus,** sp. n. (Tab. VIII. fig. 3.)

Hemisphæricus, nitidus, testaceus, prothorace elytrisque nigro-signatis.
Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, David (*Champion*).

I distinguish this insect from *L. quadratus* on account of the black colour on the elytra being less extensive, while the thorax is marked with black on the middle. We have received only two examples; in one of them the thoracic dark mark consists of three separated pieces, in the other there is a single black mark enclosing a yellow space. The dark mark on the elytra consists of a black discoidal space showing four large yellow spots.

6. **Litolibrus varians,** sp. n.

Rotundato-ovalis, sat convexus, testaceus; elytris colore variabilibus, sæpius nigris, medio rufo-bimaculatis, margine apicali testaceo; antennarum clava minus laxa, haud lata.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes, Zapote, Mirandilla, Guatemala city, San Gerónimo, Tamahu, Chacoj, Chiacam, Cahabon, San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui, Caldera 1200 feet, San Feliz (*Champion*).

This insect is considerably smaller than *L. quadratus* and *L. rufipennis*, and is not so convex; it has a more slender club to the antenna, and the basal portion of the hind tarsus is more curved. The sutural stria is distinct for about two thirds of the elytral length, and the serial punctures on the posterior part of the wing-cases are very fine. The elytra are certainly variable in colour, and doubtless this will be the case

even should the specimens I assign to *L. varians* prove to belong to more than one species, as is very possible; usually they are black, with a well-marked large red spot on each near the suture and in front of the middle, and the margin at the apex pale yellow, this colour extending forwards along the sides as far as the thorax: sometimes the red spot is not present, and occasionally it is very obscure; on the other hand, it is occasionally larger, so that the elytra are almost entirely red. Sometimes the disc of the thorax is infuscate.

The series before me, though from so many localities, is not extensive, and I am therefore unable to decide whether there may not be more than one variable species included in it, as the examples are mostly in bad condition.

We have received three examples from the State of Panama and about two dozen from Guatemala.

7. **Litolibrus posticatus,** sp. n.

Subhemisphæricus, testaceus, capite utrinque prothoraceque in medio fuscescentibus; elytris rufis, pone medium angulariter nigro-fasciatis, apice summo testaceo.

Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Teleman, Mirandilla (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This is no doubt a distinct species from *L. varians*, though not very different in colour from some varieties thereof; and if, as I expect will prove to be the case, *L. posticatus* is also variable in colour, varieties of the two may probably be found agreeing in this respect. *L. posticatus* is, however, rather larger and more convex, with a decidedly longer thorax and a larger club to the antennæ. In one example the black fascia extends completely across the elytra; in another it takes the form of a broad black cincture, leaving a large red discoidal space common to the two wing-cases; and in a third it is reduced in extent and less definite in outline. As I have seen only four examples it is impossible for me to say with certainty, in view of these discrepancies, whether all represent one species.

8. **Litolibrus fulgens,** sp. n.

Subhemisphæricus, testaceus, supra rufus; elytris stria suturali distincta aciculisque transversis subtilis, striis ceteris obsoletissimis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This insect differs from *L. rufipennis* and *L. posticatus* in the elytra being marked behind with distinct transverse scratches; the head and thorax are immaculate, and the club of the antenna large. I have only two examples before me: the type has no trace of serial punctures on the wing-cases, and the striæ that replace them can scarcely be distinguished; the other example has obscure series of punctures behind,

and in this specimen the transverse aciculations are less distinct. It is possible the two are distinct species.

9. **Litolibrus minor**, sp. n.

Subhemisphæricus, testaceus, nitidus; elytris posterius stria suturali punctisque minutis seriatis, interstitiis punctis transversis subtilibus.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Zapote, Capetillo, San Gerónimo (*Champion*).

The small size and absence of conspicuous coloration make this little insect liable to be passed over as an *Olibrus*, but it has apparently all the characters of *Litolibrus* well marked; in respect of the hind feet it is indeed most strongly removed from *Olibrus*, the suture between the first and second joints being so obsolete that it can scarcely be detected, so that the tarsi appear to consist of a very long basal joint followed by a minute joint and the rather short claw-joint. The antennæ have a short broad club developed on one side only of the mesial line (as in other *Litolibri*), the terminal joint being twice as long as the transverse penultimate joint. The thorax is short and possesses a feeble basal lobe. The sculpture of the elytra is very indistinct. The upper surface has a trace of the peculiar fulgid reflections seen in the larger concolorous species of the genus.

The example from Zapote is only about half the size of the other specimens, so that it may possibly belong to another species.

10. **Litolibrus** —— ?

Hab. MEXICO, Cerro de Plumas (*Höge*).

A single example is the only evidence of the occurrence of *Litolibrus* in Mexico. Though in a bad state of preservation it appears to be closely allied to the pallid unicolorous varieties of *L. varians*, but the obscure punctuation is more like that of *L. minor*; it is probably distinct from either of these species.

LITOCHRUS.

Litochrus, Erichson, Nat. Ins. Deutsch. iii. p. 108 note (1847) [1].

Lithocrus, Wollaston, Col. Hesp. p. 57 [2].

This genus was established by Erichson [1] in a somewhat unsatisfactory manner. After describing the characters by which he distinguished it from *Olibrus* (the most important of these being the structure of the hind tarsi), he adds that "it possesses only extra-European species, these being from the West Indies, Madagascar, and New Holland; and of described species *Sphæridium testaceum*, Fabr., from St. Thomas, and *Phalacrus brunneus*, Er., from Tasmania, belong to it." No information is given as to

the localities of the undescribed species he knew; while the wide range he assigns to it makes one suspect that he may have included more than one genus under it; he also omits to state whether he took the characters from one of the described species or from a nondescript form. Under these circumstances the genus must be restricted to such insects as agree strictly with his description of the tarsal structure. And I accept therefore as typical of it the forms from Arabia and Egypt alluded to by Wollaston [2].

The three species I assign to this genus are each represented by a single example only, so that I have not been able to examine them very thoroughly—they are extremely different in size and appearance. The first of these resembles a *Litolibrus*, but differs therefrom in having the hind tarsi evidently 4-jointed, instead of apparently 3-jointed, the basal joint being very long in *Litochrus*, while it is very short and indistinct in *Litolibrus*. This species also agrees sufficiently with the Eastern form in the structure of the breast, so that the two may be placed together at present, though I have great doubt whether they will prove to be really congeneric. *Litochrus reversus*, the second species, is apparently truly congeneric with the Eastern type of the genus. The third species I have not ventured to describe; it is the most minute Phalacrid yet discovered.

1. **Litochrus globulus,** sp. n. (Tab. VIII. fig. 4.)

Rotundato-ovalis, valde convexus, piceus, capite prothoraceque nigris, pedibus rufis, elytris sanguineis, antennarum basi testacea, clava nigra; elytris subtilissime transversim aciculatis, stria suturali sat profunda posterius munitis.

Long. 3 millim.

Hab. Panama, Volcan de Chiriqui between 2500 and 4000 feet (*Champion*).

Antennæ with the club elongate, black, the tenth joint nearly as long as broad, the eleventh joint a little longer. Thorax distinctly lobed in the middle behind, not margined. Elytra of a dark red colour, very shining, without any punctures or striæ other than the sutural stria, but with some very fine transverse scratches; the sutural stria extends about halfway to the front. Unique.

2. **Litochrus reversus,** sp. n.

Ovalis, sat convexus, rufo-testaceus, supra niger, nitidus, elytris strigulis transversis subtilibus.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ yellow, with large, loosely-articulated club. Thorax lobed in the middle at the base, but not margined. Elytra with very fine short transverse aciculations, and with a sutural stria, this latter placed very close to the suture at the apex but diverging in front; the transverse aciculations become obsolete on the apical part, but some

traces of longitudinal striæ may be detected there converging towards the sutural stria. The raised lateral margin and the sides of the thorax, as well as the scutellum, are picescent. One example in a bad state of preservation.

So far as I can see, this is a true *Litochrus* with slender hind feet; the difference of colour between the upper and under surfaces is remarkable.

3. **Litochrus** (?) —— ?

Hab. Panama, Tolé (*Champion*).

A single example, smaller even than *Olibrus atomarius*, is referred to this genus with some doubt, as I am unable to get a good view of its sculpture.

OCHROLITUS, gen. nov.

Tarsi posteriores filiformes, articulo basali elongato, secundo elongato, tertio parvo, quarto secundo paullulum breviore. Metasternum medio parum prominulum, rectum, subtiliter marginatum; mesosternum haud conspicuum; prosternum apice libero, brevi, marginato. Tibiæ bene calcaratæ.

The genus is described from a single badly preserved individual. So far as the tarsi are concerned it might be treated as a *Litochrus*; but the structure of the breast is not sufficiently concordant with that of the other species, so I think it advisable to separate it as distinct. The small prosternal process projects beyond the front coxæ and has a rounded and margined extremity; the middle coxæ are but narrowly separated and the metasternum is very little prominent, and yet the mesosternum does not form a distinct piece in front of its margin, these two parts being formed much as in *Litolibrus*, from which *Ochrolitus* differs very much in the structure of the hind feet.

1. **Ochrolitus optatus,** sp. n. (Tab. VIII. fig. 5.)

Ovalis, convexus, nitidus, rufus, prothorace picescente ad latera dilutiore; elytris stria suturali striisque duabus internis cum stria suturali ante apicem conjunctis.

Long. $2\frac{1}{4}$ millim.

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

Antennæ yellow, with very broad club. Thorax not margined at the base. Scutellum quite small. Elytra with a fine sutural stria, and two other striæ that touch the sutural one, one in front of the other some distance before the extremity, and besides these with some very fine transverse aciculations on the apical portion. All the feet slender.

We have received only a single example. The broad club of the antenna and the peculiar convergent striæ on the wing-cases render this insect easy of recognition.

Fam. NITIDULIDÆ *.

Of this family we have obtained, as will be seen from the following pages, specimens of a considerable series of species ; but among them there are representatives of comparatively few new generic forms. The Nitidulidæ are all small insects, and the family is notorious for the difficulty attending the discrimination of the species contained in it. Very little knowledge has yet been obtained of the Nitidulidæ inhabiting the tropics, so that nothing of value can be said as to the geographical distribution of the species of our region. The Nitidulidæ of Europe and those of North America have been fairly well worked out, and the former of these regions has about 240, the latter about 110 species. In the year 1868 the number of known species of the family was 791 ; a nearly equal number have been since described as new, but as, during the same time, a large number of synonyms have been recognized, it is probable that the total number of admitted species of the family now lies between 1400 and 1500. According to Mr. Champion, some of the Central-American species of Nitidulidæ abound in rotten oranges and other fruits, and also in refuse sugar-cane ; others are found in the spathes of various Aroideæ, vegetable refuse, under sappy bark, on flowers, &c.

Subfam. *BRACHYPTERINÆ.*

BRACHYPTERUS.

Brachypterus, Kugelann, in Schneid. neuest. Mag. 1794, p. 560 ; Erichson, in Germar's Zeitschr. iv. p. 230 ; Murray, Mon. Nitidulidæ in Trans. Linn. Soc. xxiv. p. 240.

This genus contains about thirty species, all these inhabiting the Palæarctic or Nearctic regions, with the exception of an Australian insect which is said to belong to *Brachypterus*.

1. Brachypterus urticæ.

Dermestes urticæ, Fabr. Ent. Syst. i. p. 235 [1].

Brachypterus urticæ, Er. in Germ. Zeitschr. iv. p. 231 [2] ; Murray, Trans. Linn. Soc. xxiv. p. 242 [3] ; Horn, Trans. Am. Ent. Soc. vii. p. 270 [4].

Hab. NORTH AMERICA [2 4].—MEXICO, Cordova (*Sallé*).—EUROPE [1 2 3].

The occurrence of this species in our region is quite unexpected. The two specimens, however, on the authority of which I record it apparently differ from those of Europe in having the sides and base of the thorax completely rounded. Horn [4] considers the species in North America as "probably introduced from Europe." Murray, on the other hand, records the North-American insect as a variety of the European species

* By D. SHARP.

distinguished by a character similar to that I notice in our Mexican specimens. It would thus seem probable that the New-World species is distinct from that of Europe.

2. **Brachypterus globularius.**

Brachypterus globularius, Murray, Trans. Linn. Soc. xxiv. p. 245 [1]; Horn, Trans. Am. Ent. Soc. vii. p. 270 [2].

Hab. North America [1 2].—Mexico [1].

The distinction of this species from the North-American var. ? of *B. urticæ* appears from Horn's remarks [2] to be very doubtful.

Subfam. *CARPOPHILINÆ.*

MYSTROPS.

Mystrops, Erichson, in Germar's Zeitschr. iv. p. 234 (1843); Murray, Trans. Linn. Soc. xxiv. p. 410.

Priops, Reitter, Verh. Ver. Brünn, xii. p. 167.

Six species of this genus are described from South America, besides the one from our region on which Reitter founded the genus *Priops*, and there is a species described by Erichson from Madagascar. Reitter assigned *Priops* to Brachypterinæ, but without dissecting the mouth, and without noticing that his species is extremely close to *Mystrops debilis*, Er.; and I must therefore place his genus at present as a synonym of *Mystrops*. At the same time it is only proper to remark that *Mystrops* is composed of species of heterogeneous appearance; and it is quite probable that it may require to be divided, and even that some of its components may have to be placed in the Brachypterinæ, in which case Reitter's name will be restored for his species and *M. debilis*, Er.

1. **Mystrops durus.**

Mystrops durus, Er. in Germ. Zeitschr. iv. p. 235 [1]; Murray, Trans. Linn. Soc. xxiv. p. 411 [2].

Hab. Panama, Caldera in Chiriqui (*Champion*).—South America, Brazil [1 2].

We have received one female only of this species.

2. **Mystrops rotundulus,** sp. n. (Tab. VIII. figg. 9, 9 *a*, ♂.)

Brevis, convexus, nitidus, parcissime pubescens, testaceus, elytris circa scutellum nigricantibus; capite anterius concavo; oculis hemisphæricalibus.

Long. 2 millim.; lat. $1\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 6000 feet (*Champion*).

Antennæ very long, stout; first joint incrassate, a little concave above, joints 2–8 nearly similar to one another, each thicker at the extremity, ninth joint longer but similar in form, tenth and eleventh quite short and not broader. Front of head hollowed; upper edge of mandibles elevated. Thorax strongly transverse, sparingly and not very finely punctured, all the angles minutely prominent. Elytra of a more pallid yellow colour, but infuscate about the scutellum, rather sparingly and coarsely punctate. The exposed parts of the hind body quite short.

We have received three examples of this very distinct species; one of them has the antennæ much shorter, but I have no doubt they are all males; there is no supplementary apical segment. The prosternal process is margined, dilated, and a good deal prolonged behind the coxæ, a little curved upwards. The structure of the mandibles (fig. 9 *a*) is very peculiar, and, conjoined with the depressed front of the head, makes the species very easy of recognition.

3. **Mystrops teapensis,** sp. n. (Tab. VIII. fig. 10.)

Oblongo-ovalis, convexiusculus, subtiliter pubescens, subtilius crebre punctatus, subopacus, testaceus, pectore antennarumque clava fuscescentibus.

Long. $2\frac{1}{4}$ millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*).

Female.—Antennæ reaching not quite to the back of the thorax; first joint of club short, not much longer than the second. Head scarcely impressed in front, finely but distinctly punctate. Thorax convex, a good deal narrowed in front; anterior angles obtuse, the hind angles rendered indistinct by long ciliæ; the surface finely but distinctly, moderately closely, punctate. Elytra elongate, quite as finely and scarcely so closely punctate as the thorax, leaving two dorsal segments exposed.

We have received one specimen only of this species; but as it is quite distinct from any other, and marks the most northern extension of this interesting genus, I have described it without hesitation. I have an allied undescribed species from the valley of the Amazons in my collection.

4. **Mystrops mexicanus.** (Tab. VIII. figg. 7, ♂; 8, ♀.)

Priops mexicanus, Reitter, Verh. Ver. Brünn, xii. p. 168 [1].

Oblongus, pallide flavus, subtiliter pubescens, obsolete punctulatus, opacus.

Long. $1\frac{3}{4}$–$2\frac{1}{4}$ millim.

Hab. Mexico, Tacubaya [1]; Panama, Volcan de Chiriqui (*Champion*).

Eyes large, prominent. Head extremely finely punctate, feebly transversely impressed in front. Thorax strongly transverse, the sides slightly narrowed in front, very little curved, truncate in front; hind angles rather obtuse, but rendered apparently more rectangular by a minute ciliation; front angles quite as distinct as the hind, slightly

obtuse and but little rounded. Elytra elongate, truncate at the extremity in the female, slightly more rounded in the male.

We have received a small series of this species showing that the male varies greatly as regards the development of the antennæ: in some examples they are as long as the body, in others only about half as long; in the female they are short, and in this sex the first joint of the club is nearly as long as broad, and nearly conical in one of its outlines. The species is no doubt closely allied to *M. flavicans*, Murray, but that insect is represented as having a rather slender, long basal joint to the antennæ, whereas in *M. mexicanus* this joint is much thickened, and not very long in even the largest males.

Reitter's description [1] was made from a specimen in the Imperial Museum at Vienna, and our figure of the male is taken from this individual. Our figure of the female is taken from a Panama example; and I am informed by Herr Schlereth, to whom I sent specimens of both sexes of the series from Panama, that there is no doubt that these examples are of the same species as the Mexican type: this I understand is also the opinion of Herr Reitter himself.

5. **Mystrops heterocerus,** sp. n. (Tab. VIII. fig. 6, ♂.)

Brevis, pubescens, obsolete punctatus, ferrugineus, elytris testaceis, circa scutellum fuscescentibus; antennarum clava sat lata.

Long. 1½ millim.

Mas antennis articulis 2°–8ᵐ intus ciliatis.

Hab. GUATEMALA, Senahu (*Champion*).

Of very short form, with obsolete punctuation, which is quite distant in the male, but closer in the female. The antennæ are longer and stouter in the male than they are in the female, and differ from those of the other species of the genus inasmuch as the club is 3-jointed and of normal form; in the male they bear a fringe of long erect hairs. Head very short, very obsoletely impressed in front. Thorax transverse, nearly straight at the sides; hind angles nearly rectangular, the front angles obtuse and indistinct. Elytra elongate, leaving only the pygidium exposed. Prosternal process narrow, elevated along the middle, not bent upwards behind the coxæ. Segments 2, 3, 4 of hind body short, of equal length. Male without supplementary apical segment.

CYCHROPIESTUS.

Cychrocephalus, Reitter, Verh. Ver. Brünn, xii. p. 180 (1874).
Cychropiestus, Reitter, Col. Hefte, xiii. p. 185 (1875).

In addition to the species of this curious genus found in our region, one other is known from Colombia.

1. **Cychropiestus corvinus.** (Tab. VIII. fig. 11, ♀.)

Cychrocephalus corvinus, Reitter, Verh. Ver. Brünn, xii. p. 181 [1].

Hab. MEXICO [1] (*Truqui, in coll. Sharp; Sallé*).

COLASTUS.

Colopterus, Erichson, in Wiegmann's Arch. für Naturg. viii. 1, p. 149 (1842).
Colastus, Erichson, in Germar's Zeitschr. iv. p. 236 (1843); Murray, Trans. Linn. Soc. xxiv. p. 257.

This genus is confined to the New World, where it is numerous in species—about fifty being described—and extends its range from Rio Janeiro to the United States. The species are most of them rare, and of the majority of those described but few specimens are known, hence the specific characters are not well understood as yet, and their determination is a matter of great difficulty. Murray's *Cyllopodes* is a well-marked subgenus, but his other sections are unimportant, and I do not make use of them as they cannot be relied on, and do not help the student in any way.

Most of the species obtained by Mr. Champion were found in rotten fruits or decaying vegetable matter, or beneath sappy bark.

Front tibiæ angulate externally, frequently in the male greatly distorted.
(Subgen. CYLLOPODES.)

1. **Colastus posticus.** (Tab. VIII. fig. 12, ♀.)

Colastus posticus, Er. in Germ. Zeitschr. iv. p. 237[1]; Murray, Trans. Linn. Soc. xxiv. p. 258, t. 34. f. 1[2].

Var. *Colastus scutellaris*, Murray, t. c. p. 259[3].

Hab. MEXICO[1 2 3], Cordova (*Sallé*), Orizaba (*F. D. G. & H. H. Smith*), Mirador (*Höge*), Jalapa (*M. Trujillo, Flohr*), Teapa (*Höge, H. H. Smith*); GUATEMALA, near the city, Zapote, Senahu (*Champion*); NICARAGUA, Chontales (*Janson*).—COLOMBIA, Cartagena[1].

There are two forms of the male in this species, one with strangely distorted tibiæ as figured by Murray[2], and a second in which the tibiæ are exactly similar to those of the female. The male can be readily distinguished from the female and from the same sex of other species of the genus by the peculiar form of the last ventral plate and of the supplementary segment, the plate at the hind margin being deeply bent down in the middle, and the space arising from this accurately filled up by the narrow supplementary segment. The species is abundant in Mexico and Guatemala, and we have received more specimens of it than of all the other species of the genus together. It varies in colour, and the darker form was considered by Murray as distinct—this variety in Mexico is more abundant than the type and is found in its company; very rarely a pallid variety, almost without dark colour on the elytra, occurs. Our figure represents a female found at Teapa.

2. **Colastus guatemalenus,** sp. n.

Sat elongatus, depressus, niger, antennarum basi pedibusque rufis, femoribus obscuris, elytris singulis ad basin plaga ovali testacea.

Long. 4–4½ millim.

Hab. GUATEMALA, near the city, Capetillo, Zapote (*Champion*).

Head broad, very coarsely punctured. Thorax transverse, nearly straight at the sides, very coarsely punctate, without pubescence, the punctures rather close. Elytra seriately, finely, and subobsoletely punctured, the pubescence very minute. Scutellum punctured at the base. Hind body delicately pubescent.

This is closely allied to *C. bisignatus*, an insect found in Venezuela. We have received a good series of examples, and it apparently is one of the least variable species of the genus; there are few males with front tibiæ greatly distorted (as is the case in *C. bisignatus*) among our series of *C. guatemalenus*, and the small spot of yellow in *C. guatemalenus* is in *C. bisignatus* so large as to occupy the greater part of the wing-cases; but it is quite probable that the two may be only local varieties of one species.

Front tibiæ not at all angulate externally. (Subgen. COLASTUS proper.)

3. **Colastus mimetes,** sp. n. (Tab. VIII. fig. 13, ♂.)

C. postico fere omnino similis; rufus, nitidus, elytris nigricantibus, circa scutellum rufis, antennis fuscis, basi rufa; prothorace transverso, sparsim fortiter punctato, absque pubescentia, angulis posterioribus rotundatis.

Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

We have received only a single example, a male, of this interesting species; though almost exactly similar to *C.* (*Cyllopodes*) *posticus* ♀, it is a male of the subgenus *Colastus*: the front tibiæ are not angulate. The terminal segment is different in form from that of either sex of *C. posticus*, the fimbriæ being very broad, and the general outline rounded instead of subacuminate, the sides on the ventral aspect being strongly denticulate; the hind margin of the ventral plate is bisinuate, as is usual in the males of *Colastus*, and the supplementary segment is of the form normal in *Colastus* proper. In respect of other characters all I can see to separate the species from *C. posticus* is that the insect is considerably more depressed, and the thorax a trifle more strongly punctate.

The Brazilian *C. decorus*, Murray, is closely allied to *C. mimetes*; but is of more elongate form, has a less transverse thorax, and a more punctate scutellum.

4. **Colastus latus.**

Colastus latus, Murray, Trans. Linn. Soc. xxiv. p. 272, t. 34. f. 2 [1].

Colastus major, Reitter, Verh. Ver. Brünn, xii. p. 169 [2].

Hab. MEXICO [1 2], Cordova (*Sallé*), Jalapa (*M. Trujillo*); GUATEMALA, Tamahu (*Champion*); NICARAGUA, Chontales (*Janson*).

This species appears to be very variable in colour; it is apparently rare, as we have received only nine specimens. *C. major*, Reitter, is almost certainly founded on a colour variation; though we have no specimen agreeing exactly with his description, our nine examples show five well-marked variations of colour, so that this is a character of very little importance.

5. **Colastus macropterus,** var. n. **sordidus.**

Depressus, niger, fusco-pubescens, nitidus; prothorace fortiter sat crebre punctato; antennis pedibusque rufis, illarum clava fusca; elytris regulariter seriatim punctatis et pubescentibus, punctis longitudinaliter subelongatis.

Long. $4\frac{1}{2}$–5 millim.; lat. vix $2\frac{1}{2}$ millim.

? *Nitidula macroptera,* Fabr. Syst. Eleuth. i. p. 354 [1].

Colastus macropterus, Er. in Germ. Zeitschr. iv. p. 241 [2]; Murray, Trans. Linn. Soc. xxiv. p. 272 [3].

Hab. Mexico (*coll. Fry* [3]), Cordova (*Sallé*), Mirador (*Höge*), Jalapa (*Höge, Flohr*); Guatemala, San Gerónimo, Purula, Senahu, and San Juan in Vera Paz (*Champion*), Coban (*Champion, Conradt*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).—South America [1] [2], Brazil [3], Amazons [3], Peru [3], &c.

Head coarsely punctate, the spots over the insertion of the antennæ ferruginous. Thorax much narrowed in front, very coarsely, not closely punctate, sparingly pubescent, shining. Elytra with very regular series of punctures, the punctures not round, but suboblong, the pubescence very distinct, quite serial. Last dorsal segment sparingly and coarsely punctate. Female with an oval fovea on the last ventral plate.

Closely allied to *C. latus*, but smaller, and with a different punctuation on the wing-cases, and with the last ventral plate in each sex differently formed—in the male of *C. latus* the sinuation of the hind margin being much greater, and the female being without any fovea.

If the specimens I refer to *C. macropterus* be all one species it must be a very variable one. Most of our specimens belong to a small variety as described above, to which I assign the name *sordidus*; but other individuals differ more or less from it, and may be distinct or may be only varieties—as to this there is no decisive evidence at present, but if all are one species then certainly *C. thalestris* and *C. tonsus*, Murray, must also be included as varieties of *C. macropterus*.

One example from Chontales and another found near the city of Guatemala by Mr. Champion are larger than the var. *sordidus*, and differ but little from Murray's specimen of *C. macropterus* from Brazil. In Sallé's collection there is an example of a very remarkable variety from Playa Vicente in Mexico entirely pallid ferruginous, except the outer and apical part of each wing-case. There is also another remarkable variety represented by a single specimen found on the Volcan de Chiriqui by Mr. Champion, having a large red mark on each elytron; and there is also in our collection a specimen of a small variety from San Gerónimo, in which the pygidium is nearly destitute of punctuation.

6. **Colastus brevipes,** sp. n.

Brevis, latus, parce pubescens, nitidus, niger; antennis pedibusque rufis, illarum clava nigra; elytris pone scutellum minus argute testaceo-signatis, seriatim sat fortiter punctatis; prothorace fortius punctato.

Long. 3–$3\frac{1}{4}$ millim.

Hab. British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Zapote (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Of short, rounded form. Antennæ with very broad club. Head shining, very coarsely punctate. Thorax very short and broad, bisinuate at the base, the hind angles nearly rectangular, the surface shining, very coarsely punctate. Scutellum moderately punctate, with the apex smooth. Elytra rather shining, with regular, serial, moderately fine, oblong punctures, and very distinct serial pubescence. Hind body coarsely punctured. Legs pale red. Male with the last ventral plate broadly truncate behind, only feebly bisinuate, and not at all angulate in the middle: with three or four very distinct denticles at the sides behind.

Closely allied to *C. sordidus*, but rather smaller and more convex, with the pubescence rather longer and more distinct, and the last ventral plate of the male differently formed. Four specimens. The example from Chiriqui is much damaged and may not belong to the same species; it has no red mark on the elytra.

7. **Colastus inflatipennis,** sp. n. (Tab. VIII. fig. 18, ♂.)

Brevis, latus, sat convexus, niger, nitidus, pubescens; antennis pedibusque rufis, illarum clava nigra; prothorace fortiter punctato; elytris seriatim sat fortiter punctatis, circa scutellum vage rufo-signatis, convexiusculis, apice declivo.

Long. 3 millim.

Hab. Panama, Tolé (*Champion*).

Head moderately closely punctate. Thorax very strongly transverse, bisinuate at the base, the hind angles nearly rectangular, the punctuation somewhat coarse and rather close. Scutellum moderately closely punctate. Elytra with the serial punctuation rather fine.

We have received only one specimen of this little *Colastus*, which will be, I think, easily recognized by the somewhat convex elytra being rather abruptly and broadly declivous behind. The example is a male, and has the hind margin of the last ventral plate bisinuate, and distinctly produced in the middle, but only feebly angulate; there are three or four fine lateral denticles. In general appearance this species resembles *C. brevipes*, the peculiar form of the elytra being only conspicuous when the insect is looked at in profile.

8. **Colastus vestitus,** sp. n.

Minus latus, sat convexus, dense pubescens, niger, elytris singulis plaga magna, antennis pedibusque rufo-testaceis, antennarum clava fusca; prothorace convexo, fortiter, profunde sat crebre punctato; elytris subtilius seriatim punctatis.

Long. 4 millim.

Hab. Mexico, Mirador (*Höge*); Guatemala, Coban (*Conradt*); Nicaragua, Chontales (*Janson*).—South America, Venezuela (*Brit. Mus.*).

Closely allied to *C. latus* and *C. sordidus*, but narrower, with more abundant pubescence, and with finer punctuation on the elytra; the hind margin of the last ventral segment in the male forms an angle most prominent in the middle, and each of the

lateral margins forms a small free angular projection; the female has no fovea on the last ventral plate; and in each sex the denticulation of the margins is very obsolete. The red mark on the elytra is conspicuous and nearly triangular, placed quite at the base.

The insect above described agrees with a specimen in the National Collection named by Murray *C. plagiatus*, Erichson; but it does not agree at all satisfactorily with Erichson's description, and I think it better to give our insect a separate name. Murray considered *C. plagiatus* to be itself only a variety of *C. vulneratus*, Er., but on this point I have not sufficient evidence. The eight examples we have received of *C. vestitus* are no doubt all of one species, though they differ a little in size and in the extent of the red marks on the elytra. A specimen of *C. vestitus* from Venezuela is extant in the British Museum, labelled *C. bimaculatus*, var. *minor* by Murray; but it does not agree with the description of *C. bimaculatus*.

9. **Colastus mollis,** sp. n.

Minus latus, subdepressus, dense pubescens, fusco-niger; antennis pedibusque rufo-testaceis, illarum clava fusca; prothorace minus convexo, crebre fortiter profundeque punctato; elytris crebre subtiliter seriatim punctatis.

Long. $3\frac{1}{4}$–4 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Rather narrower and more depressed than *C. latus*, more finely punctate on the elytra, and densely pubescent. Thorax much narrowed in front, its punctuation close and very coarse, the hind angles not acute but furnished with elongate setæ. Scutellum entirely covered, except at the hind margin, with punctures. Elytra with numerous closely placed series of punctures, the punctuation at the hind margin finer, closer, and less regular. Dorsal segments coarsely and closely punctured.

We have received only two specimens, and though one of them is ferruginous in colour they are no doubt of the same species. Though similar to *C. vestitus* the differences in punctuation are well marked, and the form is more depressed; the breast is broadly canaliculate in the middle behind. Both examples are males; the hind margin of the last ventral plate is very little angulate in the middle; the sides behind are furnished with four or five very distinct denticles.

10. **Colastus lævicollis,** sp. n.

Depressus, piceus, politus, pubescentiæ destitutus; prothorace sparsim obsoletissime punctulato; elytris remote, subtiliter seriatim punctatis; antennarum basi pedibusque testaceis.

Long. $4\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba, Tolé (*Champion*).

Thorax short and broad, greatly narrowed in front, the base sinuate on each side, the hind angles projecting slightly backwards, the surface polished and shining, with some

very minute distant punctures. Scutellum large, shining, and impunctate. Elytra with series of distant fine punctures. Hind body more coarsely punctate.

Three specimens, all females, have been procured of this distinct *Colastus*. Except in the polished surface and absence of pubescence, it seems rather near to *C. macropterus*, var. *sordidus*. The example found at Tolé is yellow in colour, but belongs, I have no doubt, to the same species.

11. **Colastus dispar.**

Colastus dispar, Murray, Trans. Linn. Soc. xxiv. p. 268 [1].

Hab. Mexico, Toxpam [1], Puebla, Cordova (*Sallé*), Jalapa, Mirador (*Höge*).

This species is easily recognized by the comparatively elongate form, the distinct pubescence, obtuse hind angles of the thorax, and large size of the terminal two segments of the hind body; in each sex the lateral margins of the last ventral plate are strongly denticulate. The colour of the elytra varies as in many other species of the genus. Five specimens.

12. **Colastus setiger,** sp. n. (Tab. VIII. fig. 14, ♂.)

Depressus, nigerrimus, antennarum basi pedibusque piceis, elytris ex parte majore rufis; minus subtiliter pubescens; prothorace crebrius fortiter profundeque punctato; elytris seriatim crebre sat subtiliter punctatis.

Long. $3\frac{1}{4}$–4 millim.

Hab. Guatemala, San Gerónimo, San Joaquin (*Champion*).

Head coarsely, deeply, and closely punctate. Thorax with the base feebly bisinuate, the hind angles scarcely at all produced backwards, very nearly rectangular, the marginal ciliæ long, the surface remarkably coarsely and deeply, rather closely punctate, the disc not deplanate. Elytra in greater part red, the margins black, and a triangular space at the base black, the suture more or less blackish. Hind body very coarsely punctate, the marginal hairs elongate. The male has the apex of the last dorsal plate compressed and subplicate in the middle at the extremity; the last ventral plate bisinuate behind, with prominent denticles.

We have received seven specimens of this insect, which is quite distinct from any other of our species, but is closely allied to *C. ater*, Murray; the latter, however, is entirely black, has the elytra more coarsely and deeply punctate, and the pygidium of the male more elongate and less punctate. In our figure of *C. setiger* the supplementary dorsal segment of the male is extruded.

13. **Colastus angularis,** sp. n.

Perdepressus, fortiter punctatus, pubescens, subnitidus, colore instabili, flavo-ferrugineus, corpore elytrorumque marginibus plus minusve infuscatis; prothoracis margine basali ad angulos posteriores minute prominulo.

Long. 3–4 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Head very wide, coarsely punctate. Thorax with the base scarcely at all bisinuate, the hind angles just about rectangular, the surface closely, coarsely, and deeply punctate. Elytra with dense pubescence, and very regular closely-placed series of punctures. Dorsal segments of hind body coarsely punctate.

The six examples received of this species are all females; it may be distinguished from all the others I have seen of the genus by the fact that when it is looked at beneath there is a slight excision seen at the side of the thorax close to the hind angle, thus giving the angle the appearance of projecting minutely outwards.

14. **Colastus chiriquensis,** sp. n. (Tab. VIII. fig. 16.)

Perdepressus, supra fuscus testaceo-variegatus, pubescens, subopacus, dense fortiter punctatus, subtus pedibus antennisque rufis, harum clava fusca; prothoracis angulis posterioribus subobtusis.

Long. 4–5 millim.; lat. 2 millim.

Hab. GUATEMALA, Sinanja (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Head very coarsely punctate. Thorax rounded at the sides, the hind angles not at all produced backwards, but slightly acute, the surface very coarsely punctate, the punctures evenly distributed, the disc not flattened, a large rufous patch along the middle, the sides near the hind angles vaguely rufescent. Elytra short and broad, the surface opaque, serially punctate, the punctures finer than those on the thorax; near the base of each elytron is a small indefinite red mark. Hind body coarsely punctate, the segments red along the middle. The hind margin of the terminal ventral segment in the male is rather feebly bisinuate, and the lateral denticles are almost invisible.

We have received seven examples of this species; the variegation of the colour of the surface is not constant, and not much importance can be attached to it.

15. **Colastus simplex.** (Tab. VIII. fig. 15, ♂.)

Colastus simplex, Murray, Trans. Linn. Soc. xxiv. p. 274[1].
Colastus simplex, var. *sallei,* Murray, l. c.[2]
Colastus brevicollis, Murray, t. c. p. 271[3].

Hab. MEXICO[2], Cordova (*Sallé*); GUATEMALA, Chacoj, Teleman (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).—AMAZONS, Ega[3], Santarem[1].

Apparently a rare species, only one specimen having been obtained in each locality: sometimes the elytra are red. I can see no distinction of importance between *C. simplex* and *C. brevicollis*, Murray, and adopt the former name as being accompanied by the better description.

16. **Colastus punctiventris,** sp. n. (Tab. VIII. fig. 17, ♀.)

Nigerrimus, parcius brevissime pubescens, dense et fortiter punctatus; abdominis segmentis ultimo et penultimo densissime punctatis, antennarum basi tarsisque rufis.

Long. 4 millim.; lat. 2 millim.

Hab. Panama, Bugaba (*Champion*).

We have received only one specimen, a female, of this insect; but there can be little doubt that it is a distinct species, and one that will be readily recognized by the sculpture. In form similar to *C. latus*, but more depressed, and with only so minute a pubescence that it appears to be glabrous. Thorax short, greatly narrowed in front, very coarsely punctate. Elytra very coarsely, densely punctate, the punctuation crowded, but quite regularly serial. Penultimate segment of hind body unusually densely punctate, the terminal segment coarsely and densely punctate; terminal ventral plate broad and short, without fovea. Channel on metasternum remarkably deep and broad.

This insect has an oblique fovea within the hind angles of the thorax as in *C. morio*, *C. lugens*, &c.; but is smaller, and has the punctuation of the elytra coarse and close.

17. **Colastus denticulatus,** sp. n.

Minus latus, perdepressus, sublævigatus, nitidus, niger, elytris rufis, marginibus nigris, antennis piceis, pedibus sordide rufis; minus fortiter haud dense punctatus.

Long. 3–3½ millim.

Hab. Mexico, Cordova (*Sallé*); British Honduras (*Blancaneaux*); Guatemala, San Gerónimo, Chacoj, and San Juan in Vera Paz (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Thorax truncate at the base, the hind angles slightly obtuse and a little rounded, the surface shining, sparingly and rather finely punctate. Elytra shining, with rather fine and not dense serial punctuation. Hind body with the last segment large, quite rounded at the sides, rather more coarsely punctate than the anterior parts. The male has the hind margin of the last ventral plate broadly but slightly excised, scarcely at all bisinuate, the lateral denticles unusually prominent, and the hind margin of the supplementary segment quite visibly denticulate; in the female the denticles are much smaller.

This in colour resembles the North-American *C. semitectus*, but that insect is larger, less depressed, more coarsely punctate, and much less shining. *C. denticulatus* is still nearer to *C. amputatus*, Er., but is of a different colour, and has the last segment of the hind body differently shaped.

18. **Colastus amputatus.**

Colastus amputatus, Er. in Germ. Zeitschr. iv. p. 243 [1]; Murray, Trans. Linn. Soc. xxiv. p. 277, t. 34. f. 3 [2].

Hab. Mexico, Teapa (*H. H. Smith*), San Juan Bautista in Tabasco (*Höge*); Nicaragua, Chinandega (*Sallé*).—South America, Colombia [2], Brazil (*coll. Sharp*); Antilles, Cuba [1] (*coll. Sharp*).

19. **Colastus truncatus.**

Nitidula truncata, Randall, Boston Journ. Nat. Hist. ii. p. 18[1].
Colastus truncatus, Lec. Col. Lake Sup. p. 222[2]; Horn, Trans. Am. Ent. Soc. vii. p. 283[3].
Colastus infimus, Er. in Germ. Zeitschr. iv. p. 245[4]; Murray, Trans. Linn. Soc. xxiv. p. 281[5].

Hab. North America[4], United States[1 2 3 5].—Mexico[5]; Guatemala, Yzabal (*Sallé*), Guatemala city, San Gerónimo, Capetillo, Zapote (*Champion*).—Brazil[4]; Antilles, Guadaloupe (*coll. Fleutiaux*), Puerto Rico[4].

20. **Colastus aberrans,** sp. n. (Tab. VIII. fig. 19, ♂.)

Brevis, sat convexus, subtiliter densissime punctatus et pubescens, opacus, colore instabili, fuscus vel nigro-fuscus; abdominis tantum segmentis duobus expositis.
Long. 3 millim.; lat. 1½ millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Head densely punctate. Thorax large, convex, rounded at the sides, the hind angles obtuse, the surface densely and finely punctate and pubescent. Scutellum large, densely and finely punctate. Elytra with rather close, very fine punctuation, not in the least serial in its arrangement.

We have received only three examples in very decayed state of this peculiar insect; it superficially resembles *C. truncatus*, but is much more convex, and has only two dorsal segments exposed, and in fact is very different from any other species of the genus. *C. aberrans* evidently varies a good deal in size and colour; our figure is taken from the largest individual, a male.

BRACHYPEPLUS.

Brachypeplus, Erichson, in Arch. für Naturg. viii. 1, p. 148 (1842), and in Germ. Zeitschr. iv. p. 245; Murray, Trans. Linn. Soc. xxiv. p. 286.

This genus was proposed by Erichson for two insects from Tasmania, but subsequently many others from various regions have been added to it. As at present constituted it is extremely heterogeneous, and requires a careful examination, and no doubt division. Murray has established several subgenera in it; but the only important characters he gives are based on distinctions in the trophi, and cannot, therefore, be of practical use in the present rudimentary condition of collections—a large number of species being known by so few specimens that the ligula cannot be dissected.

Several species of the genus have been described from South America and the Antilles; but it is represented in North America only by a single species found very rarely in Florida, and possibly of West-Indian origin. Seven are here noticed as occurring in Central America.

1. **Brachypeplus vicinus,** sp. n. (Tab. VIII. fig. 20, ♂.)

Depressus, dense subtiliter punctatus, subtiliter pubescens, opacus, fuscus, prothoracis lateribus, antennis pedibusque testaceis, antennarum clava nigro-fusca; prothorace transverso; elytris subtiliter costatis.
Long. $4\frac{1}{2}$–5 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Var. Minor, long. $3\frac{1}{2}$ millim.; pallidior, vix adeo dense punctatus.

Hab. PANAMA, Bugaba (*Champion*).

Head densely and finely punctate, feebly pubescent, very indistinctly bi-impressed in front. Thorax rather strongly transverse, only slightly curved at the sides, a little emarginate in front, the hind angles a little produced backwards, and slightly acute, the surface densely, moderately finely, subrugosely punctate. Elytra not quite so long as their united width, very delicately costate, with the interstices closely and finely punctured, the hind angles very much rounded. Hind body very densely and finely punctured. Male with a large supplementary segment, the last ventral plate somewhat impressed or deplanate along the middle, and more densely punctate.

Allied to *B. anceps*, Murray. The variety from Bugaba is represented by only one female, and may be distinct. There are, I believe, two or three closely allied species extant in collections as *B. anceps*, Murray; but the present one does not agree with any other I have seen, though it comes nearest to an insect from Bahia, which has a rather shorter thorax, with less prominent front angles.

2. **Brachypeplus costatus,** sp. n. (Tab. VIII. fig. 22.)

Valde depressus, parallelus, parce minus subtiliter pubescens, opacus, fuscus; prothorace valde transverso, dense fortiter punctato; elytris argute costatis.
Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Head closely and coarsely, but not deeply, punctate. Thorax very strongly transverse, quite truncate in front, the anterior angles entirely rounded, the sides nearly straight, a little narrowed behind, the hind angles obtuse, the surface coarsely punctate, covered with depressed setæ. Scutellum triangular, coarsely punctate. Elytra nearly twice as long as the thorax; with very regular distinct costæ, and the grooves between them very obsoletely punctuate. Hind body coarsely punctate, the lateral margins strongly curved.

We have received only two specimens of this distinct species; both apparently are females.

3. **Brachypeplus brachypterus,** sp. n.

Perdepressus, parallelus, dense subtiliter punctulatus, subtiliter pubescens, fusco-ferrugineus; prothorace transverso; elytris obsolete costatis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes, El Reposo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Head broad, densely punctate, without trace of any prominent angle behind the eyes. Thorax much broader than long, truncate in front, with slightly obtuse front angles, nearly straight at the sides, the hind angles nearly rectangular, slightly obtuse; the surface densely, rather finely, subobsoletely punctate. Elytra with regular but very feeble costæ, and with obsolete punctuation between them. Dorsal segments closely punctate, a little shining. Male with a very distinct supplementary segment. Five specimens.

4. **Brachypeplus staphylinoides,** sp. n. (Tab. VIII. fig. 21, ♂.)

Perdepressus, parallelus, dense subtilissime punctatus, subtilissime pubescens, fusco-ferrugineus vel nigro-fuscus, opacus, antennis pedibusque rufis; capite post oculos angulo genali acute prominulo.

Long. 3–3½ millim.

Hab. GUATEMALA, El Tumbador, Cerro Zunil, Zapote, San Gerónimo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui, Tolé (*Champion*).

Head broad, closely and finely punctate, the hind angle slightly projecting outwards behind the eye. Thorax transverse, very slightly emarginate in front, the sides nearly straight, the hind angles rectangular, the surface very densely and finely punctate. Elytra extremely finely costate, the sculpture between the costæ quite obsolete.

This little insect greatly resembles the members of the genus *Omalium* in the Staphylinidæ. It is easily distinguished from *B. brachypterus* by the prominent angle behind the eye. We have received nearly thirty examples of the species; it varies a little in size and a good deal in colour.

5. **Brachypeplus conoteloides,** sp. n. (Tab. VIII. fig. 24.)

Subdepressus, fusco-ferrugineus vel nigro-fuscus, tenuissime pubescens, subopacus; prothorace fortiter punctato, transverso, angulis omnibus rotundatis; elytris subtiliter costatis.

Long. 3⅞ millim.

Hab. MEXICO, Teapa (*Höge*); GUATEMALA, Senahu (*Champion*); NICARAGUA, Chontales (*Janson*).

Head broad, densely and rather coarsely punctate. Thorax nearly truncate in front, the anterior angles nearly as much rounded as the posterior ones, coarsely punctate, the punctuation coarser and more definite along the middle than at the sides. Scutellum rather large, finely punctate. Elytra with fine, definite lines, and a close, very fine punctuation between them. Hind body subacuminate. Male with a small supplementary dorsal segment.

We have received four specimens of this species: it varies in colour. Although very similar to its only American congener *B. convexus*, Murray, it is quite distinct, as it does not possess the very remarkable male characters of the Bahian species, and the pygidium is different in form.

6. **Brachypeplus lispinoides,** sp. n. (Tab. VIII. fig. 25, ♂.)

Elongatus, depressus, sublævigatus, sat nitidus, ferrugineus vel fusco-ferrugineus, tenuiter punctatus; prothorace transverso, angulis omnibus leviter obtusis; elytris regulariter striatis, interstitiis parcissime punctatis.
Long. $4\frac{1}{4}$ millim.

Hab. GUATEMALA, Chiacam and San Juan in Vera Paz (*Champion*).

Head rather finely and closely punctate, broadly bi-impressed in front, with a very minute prominent angle behind the eyes. Thorax only very slightly emarginate in front, the angles a little obtuse, the surface somewhat closely and finely punctate. Scutellum finely punctate. Elytra not twice as long as the thorax, with extremely regular series of punctures placed in striæ, and an excessively fine serial punctuation on the interstices. Dorsal segments rather finely and sparingly punctate, the margins of the fimbriæ very much curved. The male has a well-marked supplementary dorsal segment. Two specimens, differing a good deal in colour, but undoubtedly conspecific.

7. **Brachypeplus nigripennis,** sp. n. (Tab. VIII. fig. 23.)

Elongatus, sat depressus, glaber, nitidus, rufo-testaceus, elytris nigris; tenuiter punctatus, elytris obsolete seriatim punctatis.
Long. 5 millim.

Hab. PANAMA, San Miguel in the Pearl Islands (*Champion*).

Head moderately closely and finely, subobsoletely punctate. Thorax rather broader than long, a little emarginate in front, straight at the sides, except that it is narrowed near the front, the hind angles rectangular, the front angles obtuse, the surface somewhat sparingly subobsoletely punctate. Scutellum impunctate. Elytra elongate, black, with obsolete striation, and scarcely visible interstitial punctuation. Hind body very obsoletely and sparingly punctured, the fimbriæ very strongly curved. Tarsi fringed beneath with long hairs.

The only specimen received of this remarkable species is probably a female.

HALEPOPEPLUS.

Halepopeplus, Murray, Trans. Linn. Soc. xxiv. p. 324 (1864).
Chalepopeplus, Gemminger & Harold, Cat. Col. iii. p. 809.

This genus includes four or five South-American species; it is well distinguished by the strong teeth on the front tibiæ. Though Murray does not mention this character, it is conspicuous in his figure of *H. batesi.*

1. **Halepopeplus politus,** sp. n. (Tab. IX. fig. 4, ♂.)

Sat convexus, nitidus, ferrugineus, prothorace in medio, elytris abdomineque plus minusve infuscatis; crebre punctatus, elytris seriatim punctatis, interstitiis subtilissime punctulatis.
Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 3000 feet (*Champion*).

Head short, the eyes placed some distance in front of the thorax, the surface rather closely and finely punctate. Thorax rather strongly transverse, convex, much rounded at the sides, the base sinuate-emarginate near the hind angles, the front a little emarginate, the front angles extremely obtuse, the surface polished, very shining, rather finely and closely punctulate. Scutellum very minutely punctate. Elytra with distant series of fine punctures, the series slightly irregular; the interstices sparingly and extremely minutely punctate. Hind body rather more distinctly punctate. Legs yellow; tibiæ strongly bidentate externally. Male with a conspicuous supplementary apical segment.

2. **Halepopeplus optatus,** sp. n. (Tab. IX. fig. 5, ♂.)

Convexus, læte rufo-testaceus, elytris dimidio apicali nigro; politus, crebre subtiliter punctatus, elytris seriatim punctatis.

Long. $3\frac{3}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

This pretty little insect differs from *H. politus* somewhat in colour and punctuation, and also in the more important characters of the shape of the prothorax and hind body; the former has no trace of sinuation at the base or sides, these two parts being continuously rounded. The hind body is rather short, acuminate, densely and finely punctate. The basal part of the elytra is flavescent, and contrasts strongly with the black apical half. One male example.

CILLÆUS.

Cillæus, Castelnau, Etudes ent. i. p. 133 (1835); Erichson, in Germar's Zeitschr. iv. p. 247; Murray, Trans. Linn. Soc. xxiv. p. 311.

This genus was established for some species from Madagascar; to these Erichson added one from Colombia, and Murray and Reitter have since described several other insects from South America as pertaining to it, but it is unknown in the United States.

Mr. Champion states that these insects are found in the spathes of various Aroideæ.

1. **Cillæus prolixus,** sp. n. (Tab. IX. fig. 3, ♀.)

Valde elongatus, perdepressus, glaber, nitidus, subtilissime punctulatus, testaceus, elytris apicem versus abdomineque in medio fuscescentibus.

Long. $5\frac{1}{2}$–8 millim.

Hab. GUATEMALA, Sabo in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

Head very finely punctulate. Thorax quadrate, quite truncate in front, the sides nearly straight, all the angles a little rounded, very finely punctulate. Elytra also very finely punctulate, nearly twice as long as the thorax. Hind body a little more distinctly punctulate, fuscescent along the middle.

This insect cannot be confounded with any other of the genus owing to the

complete absence of pubescence. We have received only two examples, but they are male and female; the male is very much longer than the female, and has a well-marked supplementary apical segment. We figure the female, as the male has lost the club of the antennæ.

2. **Cillæus prolongatus,** sp. n. (Tab. IX. fig. 1, ♀.)

Omnino perdepressus, elongatus, parallelus, pubescens, sat nitidus, fusco-niger, pedibus sordide testaceis, elytris basin versus ferrugineis; fortiter punctatus.

Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil, Volcan de Atitlan 2500 to 5500 feet (*Champion*); PANAMA, Bugaba (*Champion*).

Head scarcely at all narrower behind the eyes, very flat, coarsely, rather sparingly, punctured. Thorax quadrate, the lateral margins straight, fimbriate, the angles slightly obtuse and feebly rounded, the surface coarsely, rather sparingly punctured. Scutellum short, punctate across the middle. Elytra nearly twice as long as the thorax, rather coarsely punctate, the punctuation subserial, more irregular at the apex than near the base and suture. Hind body more finely punctate, with elongate depressed pubescence. One female from each locality.

3. **Cillæus zunilensis,** sp. n. (Tab. IX. fig. 2, ♀.)

Perdepressus, elongatus, parallelus, pubescens, dense punctatus, subopacus, ferrugineus, elytrorum basi flavescente, apice nigricante.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

This is closely allied to *C. prolongatus*, but is no doubt a distinct species, as the differences in minor details are numerous. The head is moderately coarsely, rather densely punctate. The thorax is not quite so long as broad, closely punctate. The elytra and hind body are more closely and finely punctate; the yellow colour on the base of the former is contrasted rather strongly with the colour of the apical portion, and the pubescence is flavescent there, while on the darker part it is nearly black. One female.

CONOTELUS.

Conotelus, Erichson, in Germar's Zeitschr. iv. p. 249 (1843); Murray, Trans. Linn. Soc. xxiv. p. 333.

This genus is limited to the New World, where it occurs from the United States of North America to South Brazil, and has several species in the Antilles. The described species are only thirteen or fourteen in number. Most of the examples obtained by Mr. Champion were found upon flowers.

§ 1. *Hind body with acutely raised lateral margins.*

1. **Conotelus stenoides.** (Tab. IX. fig. 7.)

Conotelus stenoides, Murray, Trans. Linn. Soc. xxiv. p. 338 [1]; Horn, Trans. Am. Ent. Soc. vii. p. 286 [2].

Hab. NORTH AMERICA, Texas [2].—MEXICO, Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA, San Gerónimo, Senahu, Balheu, El Reposo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA [1], Bugaba, Volcan de Chiriqui (*Champion*).

§ 2. *Hind body with the lateral margins depressed; sculpture of the thorax dense and indefinite.*

2. **Conotelus rufipes.**

Conotelus rufipes, Murray, Trans. Linn. Soc. xxiv. p. 336 [1].

Hab. MEXICO [1], Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA (*Sallé*), Zapote, Capetillo, Dueñas, Guatemala city, Purula (*Champion*), Aceytuno (*Salvin*); PANAMA, Boquete, Peña Blanca (*Champion*).

3. **Conotelus mexicanus.**

Conotelus mexicanus, Murray, Trans. Linn. Soc. xxiv. p. 337 [1].

Hab. MEXICO [1], Cordova, Guanajuato (*Sallé*), Orizaba (*F. D. G. & H. H. Smith*), Jalapa (*Höge*), Atoyac in Vera Cruz, Teapa in Tabasco (*H. H. Smith*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Zapote, Dueñas, Aceytuno, Guatemala city, San Gerónimo (*Champion*); PANAMA, Volcan de Chiriqui, Taboga I. (*Champion*).

This is apparently a variable species and difficult to separate from *C. rufipes* in some of its varieties; indeed, I at first thought the two were mere varieties of a single species, and such may possibly prove to be the case. I think it just as likely, however, that there are two, rather common, species, and two or three others closely allied and much rarer; but as I could not at present point to any satisfactory characters to distinguish these latter I have united them as varieties of *C. mexicanus*. The individuals are darker in colour than *C. rufipes* and smaller, with rather shorter elytra and limbs, and slightly coarser punctuation, and the last segment in the male considerably more slender than it is in *C. rufipes*.

4. **Conotelus niger.**

? *Conotelus niger*, Er. in Germ. Zeitschr. iv. p. 252 [1]; Murray, Trans. Linn. Soc. xxiv. pp. 335, 336 [2].

Hab. NICARAGUA, Chontales (*Janson*).—SOUTH AMERICA, Brazil [1 2].

I ascribe a *Conotelus*, unique in our collection, to this species, chiefly because it agrees with Murray's statement that *C. niger* has the thorax more coarsely punctured than in the allied species. Erichson, however, says nothing to this effect, and indeed

describes the thorax as "subtiliter rugulosus, obsoletissime punctatus," so that Murray's determination of his *C. niger* must be considered as very doubtful; and it is also far from certain that our Chontales example is truly referable even to Murray's species. Our insect may be identified by its great resemblance to *C. rufipes*, by the existence of coarser punctures on the thorax, and by the ventral surface of the last segment in the male being deplanate, indeed feebly but broadly longitudinally depressed, along the middle, and by the large size of the pencils of erect hairs at its extremity.

5. **Conotelus nigricornis,** sp. n. (Tab. IX. fig. 8, ♀.)

Nigerrimus, opacus; capite, prothorace elytrisque densissime obsolete punctatis; tibiis piceis, tarsis rufis.
Long. 4 millim.

Hab. MEXICO, Cordova (*Höge*); PANAMA, Boquete in Chiriqui 3500 feet (*Champion*).

Very closely allied to *C. rufipes*, and similar thereto in size, form, and punctuation, but distinguished by the black antennæ and dark legs; the thorax is slightly more narrowed in front, so that the anterior angles are rather more obtuse.

We have received only three specimens, but both sexes are represented; the slight sexual distinctions appear to be the same as in *C. rufipes*.

§ 3. *Hind body with depressed lateral margins; thorax with coarse definite punctures; elytra with definite punctures arranged serially.*

6. **Conotelus hondurensis,** sp. n.

Niger, subopacus, antennis pedibusque sordide rufis, illis basi picea; prothorace coriaceo et sparsim punctato; elytris omnino opacis, seriatim subtiliter punctatis.
Long. 3 millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

Head distinctly, moderately closely punctured. Thorax at the sides with the punctuation quite confused and indefinite, but on the disc with a more definite sculpture, consisting of a few not very large punctures scattered on the opaque, minutely sculptured surface. Elytra quite dull, with regular series of fine punctures. Hind body rather more shining than the other parts, finely and sparingly sculptured. Two examples of the male sex, with broad feet.

7. **Conotelus chiriquensis,** sp. n. (Tab. IX. fig. 9.)

Nigerrimus, subnitidus, tarsis rufis; prothorace crebrius sat fortiter punctato; elytris striato-punctatis, striis ad latera et ad apicem obsoletis.
Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Var. Angustior, fortius punctatus.

Hab. NICARAGUA, Chontales (*Janson*).

Thorax on the middle with definite punctures, at the sides densely and confusedly punctured. Elytra with the punctuation so arranged as to form striæ, in which, however, the punctures can still be distinguished. Hind body moderately coarsely sculptured. Tarsi and middle of antennæ rufescent.

We have received four female specimens from the State of Panama. The presumed variety from Nicaragua is a male, and I think will probably prove to be distinct; it is the smallest individual of the genus I have seen.

8. **Conotelus latitarsis,** sp. n.

Nigerrimus, nitidus, fortiter punctatus; antennarum basi et clava piceis, medio testaceo; pedibus piceis, tarsis flavescentibus; elytris fortiter seriatim punctatis, fere striatis.
Long. $3\frac{1}{4}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Head rather closely, moderately coarsely punctured, but little shining. Thorax black, shining, coarsely punctured. Elytra only a little longer than the thorax, with series of punctures so closely placed that they almost form striæ, but yet are somewhat irregular in their arrangement. Hind body finely shagreened.

The tarsi are very broad, but the three individuals obtained being of the male sex this may not be constant; the head forms a very minute projection on each side behind the eye.

9. **Conotelus guatemalenus,** sp. n.

Minus elongatus et depressus, niger, subnitidus, crebre punctatus; elytrorum punctura subseriata.
Long. 3 millim.

Hab. GUATEMALA, near the city, Zapote (*Champion*).

Antennæ piceous, with the club black. Head rather closely and coarsely punctured. Thorax short, convex, with very numerous distinct punctures, quite free from pubescence, and with only a very minute and indistinct reticulation of the surface, the hind angles very much rounded. Punctuation of the elytra almost like that of the thorax, subserially arranged. Hind body short, sparingly punctate. Legs piceous.

This differs from the other species of our fauna by the eyes being free at the sides behind, the vertex not extending externally behind them.

10. **Conotelus nitidissimus.**

Conotelus nitidissimus, Reitter, Verh. Ver. Brünn, xviii. p. 1 [1].

Hab. MEXICO [1].

According to the description, this is more similar to the West-Indian *Conoteli* than to anything we have received from our region.

MACROSTOLA.

Macrostola, Murray, Trans. Linn. Soc. xxiv. p. 331 (1864).

Macrostola has hitherto included only three species, one found throughout our region, the others in South America; I now add a fourth from the State of Panama.

The genus is very distinct and its position doubtful. There is no trace of any antennary grooves.

1. **Macrostola straminea.**

Macrostola straminea, Murray, Trans. Linn. Soc. xxiv. p. 332, t. 35. f. 7 [1].

Hab. Mexico, Cordova (*Sallé* [1]), Teapa (*Sallé*, *Höge*), Jalapa, San Juan Bautista in Tabasco (*Höge*); Guatemala, Zapote, Cahabon, Teleman (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).

This insect, according to Mr. Champion, is found in the viscous pollen in the spathes of various Aroideæ, usually in company with various *Cyclocephalæ*; it is a common species in our region, and it varies a good deal in size.

2. **Macrostola picea,** sp. n. (Tab. IX. fig. 6.)

Picea, depressa, nitida, oculis sat magnis; elytris regulariter seriatim punctatis, interstitiis lineis impressis longitudinalibus plus minusve abbreviatis et interruptis.

Long. $4\frac{1}{2}$ millim.

Hab. Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).

Head and thorax finely and sparingly punctate, the latter nearly straight at the sides but becoming slightly broader at the base. Scutellum impunctate. Hind body with three segments exposed and rather coarsely punctate. Female with the last dorsal plate somewhat prolonged, rounded and ciliate at the extremity; male with the last dorsal plate rather deeply emarginate in the middle at the extremity, the emargination filled by a supplementary segment much ciliate behind. Twelve examples; one only of them from Nicaragua.

Closely allied to *M. straminea*, but readily distinguished by the dark colour and the smaller eyes; the hind body is more coarsely punctate and more densely ciliate at the apex. The largest individuals are scarcely so large as the smallest examples of *M. straminea.*

CARPOPHILUS.

Carpophilus, Stephens, Ill. Brit. Ent. iii. p. 50 (1830).

This genus includes rather more than 100 described species, and is generally distributed throughout the world. A few species are nearly cosmopolitan, being distributed with groceries—dried fruits, sugar, &c.; but the great majority of the

members of the genus are as strictly restricted in their distribution as Coleoptera in general are.

The species are very difficult to determine from the descriptions that have been published, as the best characters for the distinction of the species have hitherto escaped attention. These consist of the sexual peculiarities at the extremity of the hind body, which are frequently very marked, the females as well as the males possessing positive and easily recognized characters. In the male the part where these characters are best seen is the last ventral plate, whereas in the female it is the pygidium or last dorsal plate. If the pygidium of the female and the last ventral plate of the male were dissected off and figured in the case of each species, the great majority of these insects would be recognized with ease. The terminal segments in dried specimens are usually much retracted, and in that case the characters I am referring to cannot be so well perceived; if, however, the specimens be thoroughly relaxed little difficulty will be experienced in withdrawing the retracted segments to their natural position.

Murray divided the genus into several subgenera, but the majority of his divisions are quite useless, if not worse, for the purposes of arrangement and determination; I have therefore adopted a system with a view to facilitate the determination of the rather numerous *Carpophili* we have received, and give below a key to it.

Finally, I may remark that colour and size are extremely variable in a great many species of the genus, but punctuation, pubescence, shape of the thorax, and the sexual distinctions are remarkably constant; indeed in many species these characters exhibit no variation whatever in large series of specimens.

Mesosternum divided into two cells	(*C. hemipterus*)	Species 1.
Mesosternum simple		Species 2–41.
Metasternum with axillary space		Species 36–41.
Metasternum without axillary space		Species 2–35.
Sides of elytra ciliate (fimbriate)		Species 32–35.
Sides of elytra not distinctly fimbriate		Species 2–31.
♂ with the supplementary segment placed chiefly on the ventral surface.		Species 2–22.
♂ with supplementary segment placed at extremity of body, not covered by the pygidium		Species 23–35.

§ 1. *Mesosternum divided into two cells by raised spaces, between the front of which the prosternal process is accommodated.* (Species 1.)

1. Carpophilus hemipterus.

Dermestes hemipterus, Linn. Syst. Nat. ed. xii. 1, pt. 2, p. 565.
Carpophilus hemipterus, Er. in Germ. Zeitschr. iv. p. 256.

Hab. Fere ubique: NORTH AMERICA.—MEXICO, Cordova (*Sallé*), Jalapa (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Guatemala city, Capetillo, Cerro Zunil (*Champion*).

§ 2. *Mesosternum simple; metasternum without axillary space; male with the supplementary segment concealed above by the pygidium: species of comparatively large size; pubescence not forming a pattern.* (Species 2–11.)

2. **Carpophilus funebris,** sp. n. (Tab. IX. fig. 10, ♂.)

Nigerrimus, opacus, pubescens, pedibus piceo-nigris, tarsis rufo-sordidis; prothorace dense fortiterque rugulose punctato, disco posterius leviter deplanato; elytris obsolete punctatis.

Long. $4\frac{1}{4}$–5 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ black, the basal joint piceous behind. Thorax black, the sides a good deal curved, the margins not in the least picescent, the crenulation seen from above feeble, beneath quite distinct, the punctuation dense. Elytra quite dull, the punctuation quite indistinct, the pubescence depressed, concolorous. Male with the last ventral segment very deeply semicircularly emarginate for the accommodation of the supplementary segment, on each side of the middle broadly deplanate and with an oblique impression. Female with the last dorsal plate longer and more acuminate, carinate in the middle at the extremity.

I have assigned to this species as possible varieties a few specimens from Mexico and Guatemala, which may possibly represent three or four very closely allied species, or on the other hand may be, by means of other individuals, shown to belong to *C. funebris*. Mr. Champion procured a good series of it on the Volcan de Chiriqui, and the pair from Cerro Zunil are evidently the same species.

3. **Carpophilus viduatus,** sp. n.

Niger, opacus, pubescens, prothoracis lateribus antennisque piceis, harum clava nigra, pedibus rufo-sordidis prothorace dense fortiterque rugulose-punctato, disco posterius leviter deplanato; elytris obsolete punctatis.

Long. vix 4 millim.

Hab. MEXICO, Guanajuato (*Sallé*); GUATEMALA, San Gerónimo (*Champion*).

Thorax with fuscous pubescence towards the sides, the sides piceous, the crenulation distinct, the punctuation of the disc behind coarse and close. Elytra with scanty pubescence, which is fuscous at the base and shoulders. Male with a very large but shallow depression on each side of the last ventral plate; there is also a slight depression of the surface extending between the two round impressions. The female has no carina on the last dorsal plate.

This is distinguished from *C. funebris* by the picescent sides to the thorax and the different male characters. It is still more similar to *C. niger*, but that species has a ferruginous humeral spot, and the last ventral segment of the male nearly unimpressed. The œdeagus is very much smaller in *C. viduatus* than it is in *C. funebris*, and not one

fourth the size of that of *C. similaris*; it is quite similar in a specimen from San Gerónimo and in another from Guanajuato.

4. **Carpophilus similaris,** sp. n.

Nigerrimus, opacus, pedibus piceo-nigris, tarsis rufo-sordidis; prothorace fortius punctato, disco haud rugoso, posterius leviter deplanato; elytris obsolete punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This species almost exactly resembles *C. funebris*—so far at least as a single pair not in good condition enables me to judge—but is distinguished by the more distant punctuation on the middle of the thorax and by the different sexual characters; the female has no carina on the last dorsal plate, and the male has a broad vague depression on each side of the last ventral plate; the œdeagus of this sex shows such strongly marked differences from that of *C. funebris* as to leave little doubt that the two are quite distinct.

5. **Carpophilus lugubris.** (Tab. IX. fig. 11, ♂, underside.)

Carpophilus lugubris, Murray, Trans. Linn. Soc. xxiv. p. 355 [1].

Subparallelus, subopacus, nigricans, prothoracis marginibus lateralibus ferrugineis, elytris ad humeros rufo-notatis, antennis pedibusque rufis, illis extrorsum, his femoribus plus minusve infuscatis; prothorace dense rugose-punctato, disco posterius leviter deplanato; elytris obsolete sculpturatis, circa scutellum punctura magis discreta.

Long. $4\frac{1}{2}$ millim.

Hab. NORTH AMERICA, Florida [1].—MEXICO, Ciudad in Durango, Pachuca in Hidalgo, San Andres Chalchicomula, Esperanza, Jalapa (*Höge*), Guanajuato, Puebla (*Sallé*); GUATEMALA, Zapote, Dueñas, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA, Venezuela [1].

This is extremely similar to *C. niger*, Say, but is rather more parallel, and has different male characters; the thoracic margin is very nearly entire, the crenulations seen in the preceding species and in *C. niger* being absent; *C. lugubris* has, moreover, less coarse punctuation on the basal and sutural parts of the elytra.

The male of *C. lugubris* has two quite circular very deep depressions on the last ventral plate; these are situated rather near to the middle, and the space between them is not depressed. The female has no carina on the pygidium, but this is slightly convex, and more shining just at the extremity.

Herr Höge met with a large series of this insect near Ciudad, but the other localities have each yielded only one or two specimens. It varies a good deal in size, and in the extent to which the ferruginous colour invades the surface.

C. lugubris is united by Horn with *C. niger*; but this is not correct, and I think it probable the American savant may have been misled by specimens wrongly named by Murray.

6. Carpophilus rufitarsis.

Carpophilus rufitarsis, Murray, Trans. Linn. Soc. xxiv. p. 354 [1].

Hab. Guatemala (*Sallé* [1]).

I have only two females of this species at my disposal; it is the largest *Carpophilus* I know, and it is most nearly allied to *C. similaris*, but is a larger, broader, and flatter insect with finer punctuation, and with the punctures on the elytra unusually definite. The thoracic lateral margin is not crenulate. There is no carina on the last dorsal plate, which is more elongate than usual. M. Sallé's examples are not marked with more exact locality.

7. Carpophilus transitans, sp. n.

Niger, opacus, obsolete punctatus, pube variegata minus subtili vestitus, prothoracis lateribus, pedibus antennisque sordide rufis, his clava fusca.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Höge*); Guatemala, Dueñas (*Salvin*, *Champion*), Guatemala city, San Gerónimo, Quiche Mts. (*Champion*).

In this species the punctuation is obsolete, that is, true impressed punctures can scarcely be distinguished either on the thorax or elytra; the sculpture is not dense, and is rendered still more indistinct by the pubescence being more marked than usual; this pubescence is dark, but is sprinkled with flavescent-grey hairs, and these latter are most dense on the scutellum and at the humeral angles. The sides of the thorax are a good deal curved. The male has no depressions on the last ventral segment; the female has a longitudinal elevation on the pygidium near the extremity, and the lateral margins of this plate are rather more raised than usual.

We have received numerous specimens from Guatemala, but only one from Mexico; unfortunately nearly all are in a bad state of preservation.

8. Carpophilus deflexus, sp. n.

Minus depressus, fortius punctatus, opacus, pube variegata minus subtili vestitus, nigro-ferrugineus, limbo dilutiore, elytrorum humeris, pedibus antennisque rufis, his clava fusca; prothoracis margine laterali ante angulum posteriorem leviter impresso.

Long. 4–$4\frac{1}{2}$ millim.

Hab. Mexico, Mirador (*Höge*); Guatemala, Cerro Zunil, Dueñas (*Champion*).

This species has the sculpture unusually coarse, and it may be readily distinguished from *C. lugubris* by this character, and by the peculiar depression on each side of the thorax; the pubescence is variegate, like that of *C. transitans*. The male has a single broad depression on the middle of the last ventral plate, and differs from the corresponding sex of all other species of this group in having the basal half of the middle tibia cut away internally so as to be much more slender than the apical half. The female has a slight convexity of the middle of the pygidium towards the extremity.

We have received only four examples of this distinct species; the one from Dueñas is a male; the others are females, and that from Cerro Zunil is darker in colour than the others.

9. **Carpophilus lacertosus.** (Tab. IX. fig. 12.)

Carpophilus lacertosus, Murray, Trans. Linn. Soc. xxiv. p. 354 [1].
Carpophilus purpureipennis, Murray, l. c.[2]

Subparallelus, sat elongatus, argute fortiter punctatus, subopacus, nigricans, antennis pedibusque rufis, elytris fusco-rufis; prothoracis dorso leviter deplanato.

Long. 3–4½ millim.

Var. Niger, elytris læte rufis, circa scutellum marginibusque nigris, antennis pedibusque sordide rufis.

Hab. MEXICO, Northern Sonora (*Morrison*), Monclova in Coahuila (*Dr. Palmer*), Orizaba (*Sallé*), Mirador, Jalapa, Chilpancingo and Acapulco in Guerrero (*Höge*); GUATEMALA (*Sallé*), Capetillo (*Champion*).—VENEZUELA [1 2].

This is one of the most variable members of the genus in size and colour, but may be easily recognized by being more coarsely and definitely punctured than most of the other species with sinuate base to the thorax. The variety with the elytra in great part red seems to occur wherever the more obscurely coloured typical form is found. The male has the terminal ventral plate more coarsely sculptured than usual, but not visibly impressed. The sinuation of the base of the thorax on each side is distinct though slight, but the hind angles do not project backwards, and are obtuse but not in the least rounded.

C. lacertosus and *C. purpureipennis*, Murray, do not differ except in size, and are undoubtedly both one species, as is certified by the types in our National Collection.

10. **Carpophilus melanopterus.**

Carpophilus melanopterus, Er. in Germ. Zeitschr. iv. p. 262 [1]; Murray, Trans. Linn. Soc. xxiv. p. 371, t. 32. f. 11 [2]; Horn, Trans. Am. Ent. Soc. vii. p. 278 [3].

Hab. NORTH AMERICA, United States [1 2 3].—MEXICO [2 3].

We have not received any example of this species, though Horn [3] and Murray [2] mention its occurrence in Mexico. Both this species and *C. rufus* are known to me only by single specimens in our National Collection, and I am not at all sure that I have assigned a proper place to them.

11. **Carpophilus rufus.**

Carpophilus rufus, Murray, Trans. Linn. Soc. xxiv. p. 371 [1].
Carpophilus melanopterus var., Horn, Trans. Am. Ent. Soc. vii. p. 278 [2].

Hab. MEXICO [1].

Horn [2] states that this is only a variety of *C. melanopterus*. I have seen only a single specimen of each, in one case a male, in the other a female, and I am not able to express any strong opinion as to whether they are one species or not.

§ 3. *Mesosternum and metasternum simple; male with the supplementary segment concealed above by the pygidium: species of small size, with the pubescence of the upper surface having a banded or spotted appearance.* (Species 12–16.)

12. **Carpophilus comatus,** sp. n. (Tab. IX. fig. 14.)

Minor, niger, dense punctatus, opacus, pube flavescenti variegatus, antennis pedibusque rufis, illarum clava nigra.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Thorax very densely punctate, the sides but little curved and scarcely at all narrowed behind, the hind angles rectangular, the base truncate, covered with a conspicuous flavescent, almost golden pubescence, which is absent or inconspicuous on the disc. Elytra densely and finely punctured, with two irregular bands of flavescent pubescence, one at the extreme base, the other behind the middle, the other pubescence concolorous with the surface. Pygidium of the female quite simple. Male without peculiarities of the last ventral plate, the supplementary segment moderately large and a little acuminate behind. Five specimens.

In form this insect resembles *C. senilis*, but it has no coxal line on the metasternum; in consequence of the variegate pubescence it looks like *C. humilis*, but the shape of the thorax is different, and the female has the pygidium quite simple.

13. **Carpophilus humilis.**

Carpophilus humilis, Er. in Germ. Zeitschr. iv. p. 262[1].

Hab. Mexico[1], Puebla (*Sallé*), Omilteme 8000 feet, and Xucumanatlan 7000 feet, in Guerrero (*H. H. Smith*); Guatemala, San Gerónimo (*Champion*).

In this species the base of the thorax is truncate, but the sides are a little rounded and narrowed behind, so that the angles are slightly obtuse, and the base is just perceptibly narrower than the elytra. The pubescence is variegate, but the pallid portions are irregularly distributed, and do not form distinct fasciæ. The female has the apex of the pygidium raised in the middle and slightly prolonged and acuminate.

Murray identified Erichson's *C. humilis* with *C. brachypterus* (Say); but it is more than probable that he was wrong in so doing. It is true that Erichson mentions the cinereous pubescence as existing on the elytra only at the base, but probably this was due to his example being worn; indeed the pubescence that gives the banded and spotted appearance in this species and its allies is very readily removed.

14. **Carpophilus senex.**

Carpophilus senex, Murray, Trans. Linn. Soc. xxiv. p. 384[1].

Hab. Mexico[1], Cordova (*Sallé*).

Closely allied to *C. humilis* and to *C. obscurus*, but with extremely obsolete sculpture and opaque surface, and distinguished by the very rounded sides and base of the thorax. It was possibly this latter character that induced Murray to place *C. senex* in his subgenus *Endomerus*; but it does not belong there, the male ventral segments being constructed as in the species of this group; the supplementary segment is not visible at the apex, but only beneath. The species forms, however, in conjunction with *C. ventralis*, a transition to the "*Endomerus*" group of species. I have seen only three examples. In the female the pygidium is a little impressed on each side towards the extremity, and has a very minute acumen in the middle of the hind margin.

15. **Carpophilus obscurus,** sp. n.

Fusco-niger, pube variegata minus dense vestitus, crebre obsolete punctatus, opacus; prothorace quam basis elytrorum angustiore.
Long. 2½ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Extremely similar to *C. humilis*, but with the thorax more narrowed behind, so as to be a good deal narrower than the base of the elytra, and with the pygidium in the female simple. The pubescence is griseous or silvery rather than golden, is not very conspicuous on the thorax, and on the elytra is arranged so as to give a spotted rather than a banded appearance. Three examples, one male and two females.

16. **Carpophilus alticola,** sp. n.

Parvus, niger, dense punctatus, opacus, pube flavescenti variegatus, antennarum basi pedibusque fusco-rufis.
Long. 2½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,000 feet (*Champion*).

Thorax with an abundant variegated pubescence. Elytra elongate, densely and finely punctate, with a variegate pubescence, the flavescent portions being most abundant at the base and apex. Female with a feeble depression on each side of the pygidium near the extremity.

This is very closely allied to *C. humilis*, but the elytra are rather longer and more closely and definitely punctate, and there is no acumination of the apex of the pygidium in the female. We have received six examples, four of which are females.

§ 4. *Aberrant species with the thorax much constricted at the base.* (Species 17.)

17. **Carpophilus epuræoides,** sp. n. (Tab. IX. fig. 16, ♀.)

Depressus, fusco-niger, antennarum basi pedibusque sordide rufis, prothoracis margine laterali flavescente; dense subtiliter punctatus, dense, omnino subtilissime, pubescens; prothoracis basi subconstricta.
Long. 4 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,000 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

Thorax finely, very densely, not in the least rugosely punctate, the sides sinuate and contracted in front of the hind angles, which are just about rectangular, the lateral margin fine, much turned up, the space along its inner margin yellow. Elytra densely, extremely finely punctate, dull, with an exceedingly delicate pubescence. Pygidium of the female elongate, deeply depressed on each side of the middle towards the apex, the middle being somewhat elevated. Last ventral plate in the male simple.

Six specimens were found of this species, which is one of the most distinct of the genus.

§ 5. *Mesosternum and metasternum simple; hind angles of the thorax rather obtuse, but marked by a slight prominence or thickening of the margin; male with the supplementary segment not visible from above; form rather elongate and depressed; pubescence not variegate.* (Species 18 and 19.)

18. **Carpophilus ligneus.** (Tab. IX. fig. 13.)

Carpophilus ligneus, Murray, Trans. Linn. Soc. xxiv. p. 351 [1].

Hab. MEXICO [1], Parras and Saltillo in Coahuila (*Dr. Palmer*), Ciudad in Durango, Jalapa, Esperanza (*Höge*), Guanajuato, Puebla (*Sallé*); GUATEMALA, Zapote, Capetillo, San Gerónimo (*Champion*); NICARAGUA [1], Chinandega (*Sallé*); PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

This species, like several others, varies much in size; the two examples found on the Volcan de Chiriqui are a variety of very small size, with the pubescence of the upper surface more than usually developed, and the red mark on each elytron definite instead of very vague. Murray [1] gives as the locality "Nicaragua in Mexico." *C. discoideus*, Lec., is allied to *C. ligneus*, but has a rather differently shaped thorax.

19. **Carpophilus dulcis,** sp. n.

Depressus, opacus, tenuiter pubescens, minus dense punctatus, sordide ferrugineus; prothoracis lateribus rotundatis.

Long. 3 millim.

Hab. GUATEMALA, Purula, San Gerónimo, Capetillo (*Champion*).

Antennæ red, with the club fuscous. Thorax with the front margin nearly straight, the sides curved, the base sinuate, but in a different manner to what it is in the *C. niger* group, the obliquity of the outer part being directed slightly forwards; the hind angles obtuse, but, owing to the basal margin being prolonged behind the lateral margin, furnished with an excessively minute acumen directed outwards; the disc moderately coarsely and closely punctate. Elytra ferruginous, the shoulders generally slightly more dilute,

quite dull, but only distantly and quite obsoletely punctate. Pygidium of the female simple. Two examples.

Allied to *C. ligneus* by the form of the thorax, which, however, is not so strongly transverse, but differing in the ferruginous colour, the dull surface, and the obsoletely punctured elytra.

§ 6. *Mesosternum and metasternum simple; male with the supplementary segment covered by the pygidium; form depressed; pubescence not variegate.* (Subgen. *Microxanthus*, Murray.) (Species 20–22.)

20. **Carpophilus confertus,** sp. n.

Depressus, dense punctatus, opacus, ferrugineus, capite elytrorumque marginibus infuscatis, antennis nigricantibus basi rufa; prothoracis angulis posterioribus subobtusis, fere rectis.

Long. 3 millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Cerro Zunil, Zapote, Purula (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Thorax very densely punctured, a little rounded at the sides, the base at the hind angles directed outwards without obliquity either forwards or backwards. Elytra densely and distinctly punctured, the suture and the outer and hinder margins blackish. Female with the pygidium simple, but rather more narrowed than usual at the extremity.

By means of this species and *C. dulcis* there seems to be a complete transition from the form of the thorax of *C. senilis* to that of *C. ligneus*. *C. confertus* may be distinguished from *C. dulcis* by the more dense punctuation, and a slight difference in the form of the base of the thorax. The last ventral plate has in *C. confertus* similar punctuation to that preceding it, but in *C. dulcis* the surface of the last ventral plate is dull and almost without sculpture.

21. **Carpophilus erichsoni,** sp. n. (Tab. IX. fig. 18.)

Parvus, latus, niger, pedibus sordide rufis, antennarum basi picea; prothorace posterius latiore, lateribus haud curvatis, angulis posterioribus subacutis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo, Balheu (*Champion*).

Thorax with the front angles rather prominent, the sides not at all rounded, the basal and lateral margins very distinct, the hind angles projecting very slightly backwards, the surface rather closely and finely punctate, dull, not rugose. Punctuation of the elytra almost like that of the thorax. Seven specimens, all of the male sex.

This little insect in form much resembles *C. marginatus*, Er., but has no coxal line on the metasternum.

22. **Carpophilus elaterinus,** sp. n. (Tab. IX. fig. 15.)

Parvus, depressus, dense punctatus, ferrugineus, supra fusco-ferrugineus, prothoracis limbo ferrugineo, antennis pedibusque flavis, illarum clava fusca; prothoracis margine laterali subtili, angulis posterioribus acutis.
Long. $2\frac{1}{8}$ millim.

Hab. Panama, Bugaba, Tolé (*Champion*).

Thorax densely punctate, broadly flavescent at the sides, especially at the hind angles, the disc rather flattened, the neighbourhood of the hind angles unusually deplanate, the base deeply sinuate on each side, so that the hind angles are acute and directed backwards, the base exactly of the width of the base of the elytra; the sides very slightly curved, the lateral margin delicate. Elytra densely and finely punctate.

This distinct little species differs from *C. marginatus* and *C. erichsoni* by the finely margined thorax; the form of the hind angles is not quite the same in any other species of *Carpophilus* that I have seen.

§ 7. *Mesosternum and metasternum simple; male with a supplementary segment at the extremity of the body; form transversely convex; margins of the elytra not fimbriate. Male front tarsi greatly dilated, but the legs not curved; female usually with peculiar foveæ on the margins of the pygidium.* (Subgenera *Endomerus* and *Nitops*, Murray.) (Species 23–28.)

Murray founded the subgenus *Endomerus* for the species of this group known to him; the character on which he based it is, however, illusory, the hind body, far from being shorter than usual, is perhaps longer; the retracted condition of the apical segments in dried examples being due to the fact that the abdominal rings are more circular than usual.

23. **Carpophilus piger.**

Carpophilus piger, Murray, Trans. Linn. Soc. xxiv. p. 384, t. 33. f. 3 [1].

Hab. Guatemala [1] (*Sallé*), Dueñas (*Champion*).

We have received only five examples of this species, two of which are from Sallé's collection, and all are males. They have the tarsi greatly dilated, those on the front legs being indeed nearly circular; there is a rather large depression on the middle of the last ventral plate, and behind this, close to the hind margin of the segment, a slightly raised line; the punctuation of the metasternum has a peculiar granular appearance.

24. **Carpophilus palmatus,** sp. n. (Tab. IX. fig. 17, ♂.)

Fusco-niger, subtiliter pubescens, subopacus, antennis pedibusque sordide testaceis, illarum clava nigra; prothorace dense subtiliter punctato, basi utrinque subsinuata, angulis obtusis; elytris elongatis, subobsolete punctatis.
Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Thorax with the sides not much rounded, but just before the base abruptly, almost angularly, bent in, the hind angles extremely obtuse but perceptible; the surface convex, finely and closely punctured. Elytra elongate, blackish, about the base with a slight red tint, sparingly and very finely punctate. Male with the front tarsi very greatly dilated; the basal ventral segment very feebly depressed along the middle, and with a minute tubercle in front of the hind margin. Female with the apex of the pygidium shining and with the lateral margin near the apex foveolate.

Allied to *C. piger*, but with longer elytra, more obsolete punctuation, and different male characters. We have received eight examples. Our figure represents a male, but is not a very successful rendering of the peculiarities of the species.

25. **Carpophilus crassus,** sp. n.

Latus, fuscus, subtiliter pubescens, subopacus, antennis pedibusque rufis; prothorace crebre, subtiliter punctato, basi utrinque subsinuata, angulis obtusis; elytris elongatis, parce obsolete punctatis.

Long. 3½ millim.

Hab. MEXICO, Cordova (*Sallé*).

Extremely close to *C. palmatus*, but with well-marked differences in the sexual characters in each sex, and besides this rather broader, and with the punctuation of the upper surface a little finer. In the male there is a bare, deplanate, dull space along the middle of the last ventral plate. In the female the pygidium is deeply foveolate at each lateral margin at the extremity, but the extremity is not prolonged nor shining, and is subacuminate instead of subtruncate. One pair.

In this species and in *C. palmatus* the eyes are larger than usual, and show that Murray's subgenus *Nitops* cannot be separated from *Endomerus*.

26. **Carpophilus ventralis,** sp. n.

Fuscus, subtiliter pubescens, opacus, antennis, pedibus abdomineque flavis, antennarum clava fusca; prothorace crebre punctato; elytris parce omnino obsolete punctatis.

Long. 2½–3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Thorax closely and not finely punctured, the punctuation only slightly impressed but appearing rough; the sides rounded, the base not sinuate near the hind angles, which, though very obtuse, can still be distinguished. Elytra quite dull, sparingly and obsoletely punctured. In the female the pygidium is large, and broad and obtuse at the extremity, with a very feeble depression of the surface on each side along the lateral margin.

This insect is very similar to *C. senex*, Murr., which, however, has the base and sides of the thorax completely rounded, and an acumen at the apex of the pygidium. We

have received only two females of *C. ventralis*. It is extremely like *C. palmatus*, though only half the size.

27. **Carpophilus concolor,** sp. n.

Testaceus, obsolete punctatus, subtiliter pubescens, fere opacus; prothorace anterius paullo angustiore, angulis posterioribus nullis.

Long. $2\frac{1}{2}$–3 millim.

Hab. Guatemala (*Sallé*), Guatemala city, Capetillo, Zapote (*Champion*).

Eyes rather small. Thorax distinctly narrower in front than at the base, the sides but little rounded; the base not sinuate, very little rounded, the position of the hind angles only just evident; the surface moderately closely and finely, not deeply, punctate. Elytra elongate, rather sparingly and obsoletely punctate. In the male there is a small bare space along the middle of the last ventral plate. In the female the pygidium is unusually broad, rounded at the end, and at each outer side at the extremity has a very minute deep fovea.

The pallid and uniform colour distinguishes this from the allied species. The fovea on each side of the apex of the pygidium of the female is difficult to perceive owing to its position and minute size: I should not have detected this had I not looked specially for it after becoming acquainted with the peculiar structure in the corresponding sex of *C. palmatus*. We have received nearly twenty specimens of *C. concolor*.

28. **Carpophilus ophthalmicus.**

Carpophilus ophthalmicus, Murray, Trans. Linn. Soc. xxiv. p. 383, t. 33. f. 8 [1].

Hab. Mexico (*Sallé* [1]).—Trinidad [1].

I do not think this species has really been found in our region. Murray says [1]: "From Mexico and Trinidad. Collected by M. Sallé." The specimens named *C. ophthalmicus* in the Sallé collection are, however, *Haptoncus luteolus* (Er.), which has a considerable superficial resemblance to *C. ophthalmicus*; and I am of opinion that Murray described the species from a Trinidad type, and hastily and erroneously identified the examples from Mexico as the same species.

§ 8. *Mesosternum and metasternum simple; male with curved hind legs and the pygidium not covering the supplementary segment; margins of the elytra not fimbriate.* (Species 29–31.)

29. **Carpophilus mexicanus.** (Tab. IX. fig. 20, ♂.)

? *Carpophilus mexicanus*, Reitter, Verh. Ver. Brünn, xii. p. 175 [1].

? *Carpophilus limbipennis*, Reitter, t. c. p. 174 [2].

Hab. Mexico [1 2], Mexico city (*Höge*), Guanajuato (*Sallé*).

It is impossible to say with certainty what Reitter intended by his descriptions [1 2], as

they refer almost exclusively to colour, which is eminently variable in this insect, even more so, indeed, than in the allied species. *C. mexicanus*, if I am right in so calling it, is indeed one of the most variable of the Nitidulidæ in colour, and may be entirely clear yellow, entirely black, or fuscous-black; and there are many intermediate forms, such as yellow with black along the middle of the thorax, and so on. The species can, however, be readily distinguished from its allies by the coarse, definite punctuation (which does not vary perceptibly), and the strongly acuminate hind body. In the male the supplementary segment is quite exposed at the apex of the body and visible from above; beneath, however, it can scarcely be seen, as the last ventral plate is not at all emarginate, and is, indeed, longer than its corresponding dorsal portion: there is a very slight longitudinal depression on the hind part of this last ventral plate. The female has the pygidium simple, neatly and distinctly margined all round the extremity. The hind femora of the male are much incrassate, and the tibiæ rather strongly curved. In this species the margins of the elytra are quite destitute of ciliæ.

30. **Carpophilus obtusicollis.**

Carpophilus obtusicollis, Reitter, Verh. Ver. Brünn, xii. p. 175 [1].

Hab. Mexico [1].

I am unable to form a clear idea as to this insect from Reitter's description [1]; but he says that it is nearly allied to *C. mexicanus*, and that it is finely and very densely punctured, and has the angles of the thorax subobtuse.

If really allied to *C. mexicanus* it may be a species of which we have not received examples.

31. **Carpophilus curvipes**, sp. n.

Convexus, ferrugineus, crebrius minus subtiliter punctatus, breviter pubescens, opacus; prothoracis lateribus subrectis, angulis posterioribus valde obtusis, haud rotundatis.

Long. 3–5 millim.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

Var.? Elytris fusco-nigris.

Hab. Guatemala, Yzabal (*Sallé*).

Thorax with the sides not much rounded, but just before the base greatly narrowed, so that the hind angles are extremely obtuse, though their position is distinct; the surface closely, moderately finely, subobsoletely punctured. Elytra rather elongate, punctate like the thorax, but the punctures more distant. Male with the front tibiæ curved; the hind legs somewhat incrassate, and the tibiæ a little curved at the base. Female with a rather small fovea on each lateral edge of the pygidium just before the extremity.

We have received a good number of specimens, but all are in very bad condition.

It is not closely allied to any other of our species, though *C. rufus*, Murray, is somewhat allied. It varies much in size, but in other respects very little. The unique specimen from Guatemala is in a bad state of preservation, and I think may prove to belong to another species, as the pygidium appears to be rather differently formed.

C. curvipes is remarkable owing to the large size of the labrum, the division between the lobes not reaching to near the base.

§ 9. *Mesosternum and metasternum simple; male with the pygidium not covering the supplementary segment; margins of the elytra fimbriate* (*only obscurely so in* C. floralis). (Species 32–35.)

32. **Carpophilus floralis.**

Carpophilus floralis, Er. in Germ. Zeitschr. iv. p. 261 [1].

? *Carpophilus luteipennis*, Reitter, Verh. Ver. Brünn, xii. p. 174 [2].

Hab. Mexico [1 2], Mexico city, Esperanza, Jalapa (*Höge*), Cordova, Guanajuato (*Sallé*).

This name stands in the Catalogues as a synonym of *C. pallipennis*, Say; but this is not correct. *C. floralis* has the fimbriæ on the margins of the elytra almost absent, a more definite punctuation on the elytra, and the pygidium of the female quite simple at the extremity (whereas in *C. pallipennis* it is prolonged, incrassate, and somewhat reflexed). The female usually has the surface of the pygidium more or less depressed on the middle, but this is variable. The male has a small and slight depression in the middle of the last ventral plate just in front of the hind margin, and the hind margin is very slightly sinuate on each side, so that there is a slight angular projection in the middle: there is a very slight curvature of the hind tibiæ at the base.

We have received a great many examples of the species, which varies somewhat in size and also in colour, but not very much.

Reitter's description is too indefinite to allow his *C. luteipennis* to be certainly recognized, but it is probably this one.

33. **Carpophilus pallipennis.**

Cercus pallipennis, Say, Journ. Ac. Phil. iii. p. 194 [1]; Leconte, Complete Writings of Thos. Say, ii. p. 124.

Carpophilus pallipennis, Murray, Trans. Linn. Soc. xxiv. p. 372 [2]; Horn, Trans. Am. Ent. Soc. vii. p. 277 [3].

Hab. North America, United States [1 2 3], California (*Hardy*).

Var. *C. pollens.* Major, densius punctatus, peropacus, elytrorum fimbriis marginalibus densis.

Hab. Mexico [2 3], Northern Sonora (*Morrison*), San Pedro in Coahuila, Chihuahua city (*Dr. Palmer*).

In this species the female has the apex of the pygidium always more or less pro-

longed and thickened at the extremity or just above it. The male of the small form found in California has a minute vague depression close to the hind margin of the last ventral plate: in the var. *pollens* this depression is large and preceded by a bare space, which is conspicuous amidst the granular sculpture of the segment. The male of the latter also has the hind legs larger than the female, and is usually much larger in size and of darker colours. I am not sure there may not be two species, but the sexual differences of the two appear to be only degrees of development; and the size and colour are so very variable that it is probable we have to do with only a single excessively variable species, exhibiting some local distinctions.

This species and the following two would be sharply distinguished from the other *Carpophili* by the fimbriation of the lateral margins of the elytra, were it not that *C. floralis* forms in this respect a transition from the rest of the genus.

According to Dr. Horn [3], *C. pallipennis* is sometimes abundant in the flowers of *Cactus*.

34. **Carpophilus canescens,** sp. n.

Fuscus, abdomine rufo, opacus, subtilius punctatus, pube longiore pallida conspicue vestitus, antennis pedibusque testaceis; prothorace valde transverso, lateribus fortiter rotundatis, elytris prothorace multo longioribus.
Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Etla (*Sallé*).

We have received only two female examples of this insect, and though they are in bad condition I describe the species, as it will be recognized with ease. It is allied to *C. mexicanus*, but is at once to be distinguished by the fine almost obsolete punctuation and by the fimbriæ of the elytra; while from *C. floralis* and the allies of that species it is distinguished with certainty by the longer elytra. The thorax is much narrowed in front, the base and hind angles completely rounded, so that the position of the latter cannot be detected; the punctuation is quite fine, moderately close, and much concealed by the long pubescence. The punctuation of the elytra is fine and obsolete. In the female the pygidium is broad and simple at the extremity, with an extremely fine margin.

The colour will probably prove to be variable as in the allied species; the elytra are fuscous in one specimen, fuscous-yellow in the other. The fimbriation of the edges of the elytra is very conspicuous.

35. **Carpophilus longiventris,** sp. n. (Tab. IX. fig. 19.)

Convexus, opacus, minus dense pubescens et punctatus, rufus, pectore prosternoque in medio nigris, supra late sed vage fusco-tinctus; prothoracis lateribus et angulis posterioribus rotundatis.
Long. 4 millim.

Hab. Mexico, Ventanas in Durango (*Höge*).

Though we have received only one example of this species, it is clearly distinct from

C. pollens, the punctuation of the upper surface being much more scanty and the sides and base of the thorax less completely rounded, so that the position of the hind angles can be detected. The fimbriæ of the elytra are long but scanty. In the male the hind tibiæ are not incrassate, but they are more curved than usual; the last ventral plate has a fovea at the hind margin, and on each side of this a polished transverse tubercular elevation.

§ 10. *Mesosternum simple; metasternum with the hind border of the middle coxæ departing externally from the cotyloid cavity so as to mark off an axillary space.* (*Cf.* Tab. IX. fig. 21.) (Species 36–41.)

36. **Carpophilus dimidiatus.**

Nitidula dimidiata, Fabr. Syst. Ent. i. p. 261.

Carpophilus dimidiatus, Er. in Germ. Zeitschr. iv. p. 259[1]; Murray, Trans. Linn. Soc. xxiv. p. 379[2]; Horn, Trans. Am. Ent. Soc. vii. p. 277[3].

Hab. Fere ubique: North America[1 2 3].—Mexico, Parras in Coahuila (*Dr. Palmer*), Tuxtla (*Sallé*), Jalapa, Cordova, San Juan Bautista in Tabasco (*Höge*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala (*Sallé*); Honduras (*Sallé*); Nicaragua, Chontales (*Janson*).—South America, Guiana[1]; Antilles[3], Cuba[1].

37. **Carpophilus senilis**, sp. n. (Tab. IX. fig. 21 ♀, underside.)

Parum elongatus, fusco-niger, breviter pubescens, antennis pedibusque rufis, illarum clava fusca; prothorace argute minus fortiter punctato, disco subnitido; elytris subtiliter, parce punctatis; metasterno utrinque linea elevata externe abrupte deflexa.

Long. 3 millim.

Hab. Mexico, Jalapa, Cordova (*Höge*), Orizaba, Tuxtla (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala, San Gerónimo, Chacoj (*Champion*); Nicaragua, Chontales (*Janson*).

Thorax nearly straight at the sides, slightly contracted in front of the hind angles, which are very nearly rectangular. Metasternum very finely and sparingly punctate, very deeply impressed in front in the middle at its junction with the mesosternum, and with a raised line proceeding from each angle of the line of junction, extending outwards behind the middle coxa, and at the outside of the coxa much bent backwards and joining the episternal suture. Male with the last ventral plate simple, quite finely and sparingly punctate.

We have received many examples of this species, and figure the underside of a female example from Jalapa showing the axillary space.

C. succisus, Er., is rather similar to some of the examples of this species; but it has the coxal line strongly deflexed, as in *C. veræpacis*.

38. **Carpophilus veræpacis,** sp. n.

Parum elongatus, transversim convexus, niger, argute punctatus, breviter pubescens, prothoracis lateribus, antennis pedibusque rufis; elytris crebre sat fortiter punctatis; metasterno utrinque linea elevata conspicua parum sinuata.
Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Closely allied to *C. senilis*, and differing as follows:—The punctuation of the upper surface is coarser, the sides of the thorax are broadly ferruginous, and the club of the antennæ is red. The elevated line on the metasternum is more detached from the coxal cavity and inclines gradually backwards with but slight sinuation. The male has the last ventral plate densely and finely punctate in the middle.

This little insect has an additional character, that will facilitate its recognition, in a slight irregularity of the outline of the sides of the thorax. Four specimens.

39. **Carpophilus ferrugineus.**

Carpophilus ferrugineus, Murray, Trans. Linn. Soc. xxiv. p. 349 [1].

Hab. MEXICO [1], Cordova, Orizaba (*Sallé*), Teapa in Tabasco (*H. H. Smith*); GUATEMALA, San Gerónimo, Cahabon, Senahu, and San Juan in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

The examples from the State of Panama agree perfectly with those from Mexico.

40. **Carpophilus deceptor,** sp. n. (Tab. IX. fig. 22, ♂.)

Depressus, nitidus, parce punctatus, rufo-testaceus, fere absque pubescentia; prothoracis angulis posterioribus fere rectis.
Long. 3 millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*); GUATEMALA, Aceytuno (*Salvin*), Zapote, Capetillo, Dueñas, Guatemala city, San Gerónimo (*Champion*).

Var. Elytris margine posteriore nigro.

Hab. MEXICO, Cordova (*Sallé*).

This insect is extremely close to *C. ferrugineus*; it is rather broader and flatter, a little paler in colour, the thorax and elytra similarly punctured (the thorax being more coarsely punctate than in *C. ferrugineus*), the coxal line on the metasternum more indistinct and less deflexed externally, and the hind tibiæ of the male largely dilated for half their length.

I have seen only one specimen of the var. from Cordova; it has the punctuation of the upper surface rather finer, so that it may prove to be a distinct species.

The only other Mexican specimen received is a female of the ordinary type.

41. **Carpophilus marginatus.**

Carpophilus marginatus, Er. in Germ. Zeitschr. iv. p. 262 [1]; Murray, Trans. Linn. Soc. xxiv. p. 390 [2]; Horn, Trans. Am. Ent. Soc. vii. p. 279 [3].

Hab. North America, Carolina [1 2], Middle and Southern States [2 3].—Guatemala, San Gerónimo, Balheu (*Champion*).

I have no North-American specimens at my disposal to enable me to compare thoroughly all the minor structural characters with our Central-American individuals.

EUMYSTROPS, gen. nov.

Palpi graciles. Sulci antennarii parum convergentes. Pygidium ab elytris haud obtectum.

Labrum very small, bilobed. Eyes large and globular. Basal joint of antennæ but little dilated. Prosternal process rather slender, curved upwards towards the extremity. Middle coxæ slightly separated. Metasternum rather short. Hind coxæ moderately separated; the abdominal lobe between them almost truncate, on each side with a divergent raised line extending to the hind margin; second, third, and fourth segments short, together only about equal in length to the first segment. Pygidium entirely exposed. Legs short; the tarsi dilated.

This genus is established for a small insect which I at first thought would prove to be a species of *Haptoncus*. It is not, however, by any means closely allied to that genus, and indeed its characters generally are nearer to those of our *Mystrops heterocerus*. As that insect has no trace of any antennary grooves, the two cannot be treated as very closely allied; and I therefore place *Eumystrops* between *Carpophilus* and *Epuræa*, though I am extremely doubtful as to what may ultimately be considered its true position.

1. **Eumystrops centralis,** sp. n. (Tab. IX. fig. 23.)

Compactus, convexus, testaceus, subtiliter pubescens, sat nitidus, subtilius haud dense punctulatus. Long. 2 millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ short, joints 3–7 small and slender, the three terminal joints forming a moderately large, very compact club. Head very feebly punctate. Thorax strongly transverse, very slightly emarginate in front, curved at the sides, but very little narrowed behind; the base straight, the hind angles very slightly projecting backwards, rectangular, the basal margin fine but distinct. Scutellum rather large, triangular. Elytra short and broad, their apices nearly straight behind. Pygidium very broad, very obsoletely punctate, almost smooth. Legs short.

Two examples.

Subfam. *NITIDULINÆ.*

HAPTONCUS.

Haptoncus, Murray, Trans. Linn. Soc. xxiv. p. 401 (1864) [1].
Haptoncura, Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 61 (1875) [2].
Epuræa (pars), Horn, Trans. Am. Ent. Soc. vii. p. 301 [3].

Haptoncus is a genus of a few species of very small size, but has a wide distribution, occurring in the Malay Archipelago and some of the Pacific islands, as well as in the Antilles and in the Northern continent of the New World.

Reitter [2] established his genus *Haptoncura* for our species and some others; but I fail to find any character to distinguish it from *Haptoncus*, and I presume that in separating it from *Epuræa*, in which the species was at the time placed, he forgot to compare it with *Haptoncus*. Horn thinks the species may remain in *Epuræa*, but this does not seem correct; no species of *Epuræa* has the elytra so short as *Haptoncus*, and the genus is, in fact, a link between *Carpophilus* and *Epuræa*. The segments of the hind body are usually much retracted in dried specimens, but during life there are probably two segments uncovered by the wing-cases.

These points have, indeed, already been commented on by Murray [1]. This author placed the genus in the Carpophilinæ, but Reitter and Horn include it in the Nitidulinæ; I think the latter course more correct, though it must be admitted that no good line of demarcation between the two groups, as at present defined, exists.

1. **Haptoncus luteolus.** (*Haptoncus floreolus*, Tab. IX. fig. 24, ♂.)

Epuræa luteola, Er. in Germ. Zeitschr. iv. p. 272 [1]; Horn, Trans. Am. Ent. Soc. vii. p. 301 [2].
Haptoncura luteola, Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 62.
Haptoncus pauperculus, Reitter, op. cit. xii. p. 179.

Hab. North America, Gulf States [1].—Mexico, Cordova (*Höge*), Teapa in Tabasco (*H. H. Smith*); British Honduras, Belize, R. Hondo (*Blancaneaux*); Guatemala, near the city, Capetillo, Zapote (*Champion*); Nicaragua, Chontales (*Janson*).—Antilles Cuba [2].

Apparently a common insect in our region, and varying considerably in size. I have not seen any North-American examples, and entertain a slight doubt whether they are really this species, the dilatation of the male tibiæ being rather different from the figure and description given by Horn [2].

Our figure represents the male.

NITIDULA.

Nitidula, Fabricius, Syst. Ent. p. 77 (1775) ; Erichson in Germar's Zeitschr. iv. p. 273.

This genus consists of a few species found in various parts of the world, some of which, however, are incorrectly included in it. North America has three species, one of which has been found within the northern limit of our region.

1. Nitidula ziczac.

Nitidula ziczac, Say, Journ. Ac. Phil. v. p. 181 [1]; Horn, Trans. Am. Ent. Soc. vii. p. 303 [2].

Hab. North America [1 2].—Mexico, Northern Sonora (*Morrison*).

OMOSITA.

Omosita, Erichson, in Germar's Zeitschr. iv. p. 298 (1843).

About half a dozen species of *Omosita* are known ; they occur in the northern portions of the Eastern and Western hemispheres. One of our two species is peculiar, so far as is at present known, to Mexico and Guatemala, and the other is an insect that has been very widely disseminated by artificial means.

1. Omosita colon.

Silpha colon, Linn. Faun. Suec. p. 151 [1].

Omosita colon, Er. in Germ. Zeitschr. iv. p. 298 [2]; Horn, Trans. Am. Ent. Soc. vii. p. 306 [3].

Hab. Europe [1 2].—North America [3].—Mexico, Orizaba (*Sallé*), Paso de San Juan, Cordova (*Höge*).

2. Omosita funesta.

Omosita funesta, Reitter, Verh. Ver. Brünn, xii. 1, p. 45 [1].

Hab. Mexico [1], Orizaba (*Sallé*), Mexico city (*Höge*), Omilteme in Guerrero (*H. H. Smith*); Guatemala, near the city and Dueñas (*Champion*).

Apparently rare, a single example only having been received from each locality.

EPURÆA.

Epuræa, Erichson, in Germar's Zeitschr. iv. p. 267 (1843).

This genus comprises about eighty species, and is widely distributed. Twenty-four species are known from North America, but in South America it has only hitherto been obtained in Chili.

1. Epuræa integra. (Tab. X. fig. 1, ♀.)

Epuræa integra, Horn, Trans. Am. Ent. Soc. vii. p. 292 [1].

Hab. North America, Colorado [1], Arizona [1].—Mexico, Northern Sonora (*Morrison*); Guatemala, Quiche Mountains 7000 to 9000 feet (*Champion*).

The identification of the Guatemalan examples with those from Northern Mexico is not quite certain, as I have seen only two immature females from the latter locality. Our figure represents a male from the Quiche Mountains.

E. integra is the only one of our species in which the apices of the elytra are distinctly prolonged.

2. **Epuræa mexicana,** sp. n.

Oblongo-ovalis, brevis, testacea, subopaca, prothorace lateribus rotundatis, basin versus fortiter angustatis, haud sinuatis; elytrorum apicibus leviter prolongatis.

Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Northern Sonora (*Morrison*), Guanajuato (*Sallé*), Mexico city (*Forrer*).

Very closely allied to *E. integra*, but with the sides of the thorax much more narrowed at the base (though not sinuate as in *E. misera* &c.), and with the middle tibiæ of the male almost simple. The thorax is not deeply emarginate in front, and the anterior angles are but little prominent; the sides are very distinctly explanate, and the base is a little sinuate on each side, so that the angles are very sharply defined though obtuse. The elytra are not very elongate, their extremities not rounded, but oblique externally on each side, and with a distinct hiatus at the apex of the suture. The dilatation at the apex of the middle tibia of the male is very slight.

Five specimens.

3. **Epuræa torticollis,** sp. n. (Tab. IX. fig. 25, ♀.)

Oblongo-ovalis, depressa, testacea, crebrius subtiliusque punctata, latiuscula; prothorace ad basin fortiter angustato, quasi constricto.

Long. 3 millim.

Hab. Mexico, San Andres (*Sallé*).

Antennæ with joints 3, 4, 5 rather long; club a little darker in colour, elongate. Thorax strongly transverse, deeply emarginate in front, much explanate at the sides: these much rounded, constricted at the base, and the lateral margin there a little turned upwards, so that the hind angles, looked at from above and behind, seem to be a little turned outwards. Elytra not elongate, truncate at the apices. Male with a very slight incrassation of the inner margin of the apex of the middle tibia.

Allied to *E. corticina*, Er., but with a greater constriction of the base of the thorax, and with the middle tibiæ of the male almost simple. Our figure is taken from a female.

4. **Epuræa papagona.**

Epuræa papagona, Casey, Contrib. Coleopterology N. America, pt. 1, p. 35 (1884) [1].

Oblongo-ovalis, brevis, testacea, subtiliter punctulata; elytris parum elongatis, apicibus rotundato-truncatis; thorace brevi, ad basin coarctato.

Long. $2\frac{1}{2}$ millim.

Hab. North America, Arizona [1].—Mexico, Northern Sonora (*Morrison*).

Antennæ with joints 2–8 rather more slender than usual. Thorax not deeply emarginate in front, strongly transverse; the sides much explanate, curvate, the greatest width two thirds of the length from the front, behind this abruptly narrowed and sinuate; hind angles rectangular, very definite. Male with a very slight incrassation of the internal apical portion of the middle tibia.

This species was labelled *E. avara* by Morrison, but according to Horn's description I conclude it is certainly distinct from that species, though allied thereto. Compared with *E. corticina*, *E. papagona* is smaller, more finely punctate, of shorter form, and with a very slight dilatation of the male tibiæ. It is equally close to *E. labilis*, from which it is distinguished by the different shape of the base of the thorax and by the distinct dilatation of the middle tibiæ of the male. From *E. torticollis* it may be recognized by its smaller size, finer punctuation, and the shorter coarctate base of the thorax.

Casey [1] does not allude to the male characters, but as his description of the thorax and apices of the elytra agrees with this insect I have scarcely any doubt of the identification.

I think it probable that *E. papagona* may prove to be not distinct from *E. flavicans*, Reitter (Verh. Ver. Brünn, xii. 1, p. 34). Reitter gave Chicago as the locality whence his type was derived; but Horn (in Trans. Am. Ent. Soc. vii. p. 302) says:—"*E. flavescens*, Reitter, cited as having been collected at Chicago, is from Chiapas, M. Sallé having kindly examined the type in Chevrolat's cabinet." *E. flavescens*, in this remark, is no doubt a *lapsus* for "*flavicans*;" but as we have no information as to the means by which the stated error of locality was detected I cannot at present certainly identify our insect with the one described under that name.

5. **Epuræa labilis.**

Epuræa labilis, Er. in Germ. Zeitschr. iv. p. 272 [1]; Horn, Trans. Am. Ent. Soc. vii. p. 299 [2].

Hab. North America [1 2].—Mexico, Northern Sonora (*Morrison*).

One female example sent by Morrison is all we have received of this species.

6. **Epuræa soror,** sp. n.

Oblongo-ovalis, brevis, testaceo-ferruginea; prothoracis lateribus rotundatis, basin versus leviter angustatis, angulis posterioribus subobtusis; elytris parum elongatis, apicibus truncatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet, Totonicapam 8500 to 10,000 feet (*Champion*).

Extremely close to *E. labilis*, Er., but rather smaller and shorter, and with the sides of the thorax more explanate near the hind angles. The male tibiæ are in this species nearly simple: in the only specimen of that sex of *E. labilis* at my disposal I find there is a very slight dilatation, almost like a small tubercle, on the inner margin just above the apex; this, however, is very minute, and Horn places *E. labilis* in a section characterized by the male tibiæ being quite simple like those of the female. I do not think, however, *E. soror* is the same species as *E. labilis*, for the elytra are shorter, and more truncate (that is, less rounded) at the extremities. There are sometimes two obsolete dark vittæ on the thorax.

The examples of this and of the following two species were found under the bark of pines.

7. **Epuræa alticola,** sp. n.

Suboblonga, fusco-ferruginea, subopaca, sat lata, prothorace lateribus posterius leviter rotundatis, angulis subobtusis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Antennæ rather stout; club large, darker in colour. Thorax rather deeply emarginate in front; anterior angles acute; sides but little curved, slightly narrowed behind; base quite straight, so that the angles are somewhat obtuse though definite. Elytra elongate; apices not at all produced, each separately rounded. Male with a large incrassation on the inner face of the middle tibia at the apex.

Closely allied to *E. truncatella*, Mann., but very much broader, and with considerable explanation of the sides of the thorax. The minor characters of the two are so similar that I am not sure that they will ultimately prove to be distinct.

8. **Epuræa prolixa,** sp. n. (Tab. X. fig. 2, ♂.)

Oblonga, parallela, fusco-ferruginea, opaca, subtilissime punctulata; elytrorum apicibus truncatis.

Long. $3\frac{1}{2}$–$3\frac{3}{4}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Thorax feebly emarginate in front; anterior angles broad and rounded; sides only very slightly curved, and scarcely at all narrowed behind, so that the width is a little greater at the hind than at the front angles; base quite straight. Elytra elongate; apices not rounded, but truncate. Male with a slight dilatation of the middle tibiæ on the inner margin behind.

This species is so distinct by its parallel form and extremely fine, even, punctuation that it cannot be confounded with any other.

STELIDOTA.

Stelidota, Erichson, in Germar's Zeitschr. iv. p. 300 (1843)[1]; Reitter, Verh. Ver. Brünn, xii. 1, p. 12[2].

This genus consists of about twelve species, and is widely disseminated in the Western hemisphere, being represented in the Antilles as well as in North and South America. Erichson[1] assigned two species from Madagascar to the genus, but they are not included in Reitter's enumeration[2].

Stelidota is one of the numerous genera of Nitidulidæ in which the definition and recognition of the species are matters of great difficulty. I have been able to separate our species in a fairly satisfactory manner by means of the direction of the axillary line on the metasternum; but the character is not a suitable one for sectionizing the genus, as it varies gradually from species to species. This is also the case with the sculpture of the elytra and the shape of the hind legs in the male.

1. Stelidota strigosa.

Nitidula strigosa, Gyll. in Schönh. Syn. Ins. ii. p. 140[1].

Stelidota strigosa, Er. in Germ. Zeitschr. iv. p. 302[2]; Reitter, Verh. Ver. Brünn, xii. 1, p. 16[3] (nec Horn).

Hab. Mexico, Cordova (*Sallé, Höge*), Jalapa (*Höge*), Cuernavaca, Teapa (*H. H. Smith*); British Honduras, R. Sarstoon (*Blancaneaux*).—South America, Colombia[2]; Antilles[1 2].

Our specimens are clearly *S. strigosa*, Reitter (though this author[3] does not mention Mexico as a locality), and they are probably the species described by Gyllenhal[1] and Erichson[2]; but they are not the *S. strigosa* of Horn, which, to judge from the description, must be a quite different species. *S. strigosa* has the grooves of the elytra extremely shallow, in fact almost absent except at the base, the serial pubescence very short, and the surface of the elytra covered with a minute sculpture that renders it opaque. There is a rather large axillary space outside the middle coxæ; and the hind tibiæ of the male are moderately curvate and are broad at the tip, the inner edge of the short dilated part not being straight. The thorax is usually not explanate at the sides, but in some large examples a slight explanation is present. The colour is usually ferruginous or cinnamomeous, and there is no maculation, though sometimes the disc of each wing-case is largely infuscate.

2. Stelidota rubripes.

Stelidota rubripes, Reitter, Verh. Ver. Brünn, xii. 1, p. 16[1].

Hab. Mexico, Orizaba[1].

I cannot identify this species from Reitter's description. It appears to be a very small insect, and is said to have a sculpture similar to that of *S. strigosa.* Unless it

be a variety of the latter I do not think that anything we have received can be identified with it.

3. **Stelidota pallens,** sp. n. (Tab. X. fig. 3, ♀.)

Ovalis, convexa, testacea, parum nitida; elytris obsoletissime sulcatis, seriatim brevissime pubescentibus; prothorace basi utrinque sinuato, lateribus haud explanatis.

Long. 2–3½ millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Taboga I. (*Champion*).

Closely allied to *S. strigosa*, but the axillary space outside the middle coxa is quite small, as in *S. geminata*; and also distinguished by being more pallid in colour, by the minute series of hairs on the wing-cases being duplicated (the outer row of each pair being almost as large as the inner), and by there being also a feeble interstitial pubescence. In the male the dilated part of the hind tibia is rather long, and has a straight inner edge.

The very feeble sulcation of the wing-cases and their quite dull surface distinguish the species from most of the other species except *S. strigosa*.

4. **Stelidota solitaria,** sp. n.

Late ovalis, minus convexa, ferruginea, supra picea, capite, antennis, prothoracis lateribus elytrorumque signaturis ferrugineis; elytris ad basin levissime sulcatis, interstitiis nitidis, pubescentiæ seriebus brevibus haud inæqualibus.

Long. 2½ millim.

Hab. MEXICO, Cordova (*Sallé, Höge*), Atoyac, Teapa (*H. H. Smith*); GUATEMALA, Zapote, Panzos (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

This species is distinguished essentially from *S. strigosa* by the absence of the minute interstitial sculpture on the wing-cases, and more resembles *S. geminata*, from which it is easily separated by the grooves on the elytra being quite obsolete except at the apex; the maculation of the elytra is similar to that of *S. geminata*. The antennæ are more or less infuscate towards the extremity. The thorax is broad and short, much narrowed in front, and sinuate at the base, with the sides explanate; the surface densely punctured, and with a scanty, fine, short pubescence. The serial pubescence of the elytra is very even, and the alternate interstices are not at all raised: each series consists of two rows of hairs, but the outer row is so short that it is not easily detected. The axillary space on the metasternum is moderately large—larger than in *S. pallens* or *S. geminata*, but smaller than in *S. strigosa*. The middle tibiæ of the male are much curved, and possess an elongate dilatation at the apex.

5. **Stelidota geminata.**

Nitidula geminata, Say, Journ. Ac. Phil. v. p. 181 [1].

Stelidota geminata, Er. in Germ. Zeitschr. iv. p. 302 [2]; Horn, Trans. Am. Ent. Soc. vii. p. 304 [3].

Ovalis, sat lata, parum convexa, testaceo-ferruginea, plus minusve infuscata, elytris nigro-variegatis, apice nigro; prothorace lato, lateribus explanatis; elytris sulcatis, interstitiis æqualibus.

Long. 3 millim.

Hab. North America [1 2 3].—Guatemala, near the city, Capetillo, Chiacam (*Champion*).

The specimens from our region are broader, and have the elytra more variegate than the North-American examples I have seen. The axillary space is very small; the curvature of the hind tibiæ of the male very large. Erichson also records [2] the species from the West Indies and South America, but this, I think, may not be correct.

6. **Stelidota ovalis,** sp. n. (Tab. X. fig. 4.)

Ovalis, minus convexa, nitida, ferruginea, plus minusve infuscata, elytris vage maculatis; prothorace lateribus late explanatis, fere reflexis; elytris evidenter seriatim punctatis, interstitiis ad basin vix elevatis.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Calderas, Capetillo (*Champion*); Panama, Volcan de Chiriqui, Caldera (*Champion*).

Thorax deeply emarginate in front, but little convex, deeply impressed near the sides, so that these are explanate and subreflexed; base sinuate; hind angles slightly acute. Elytra elongate, shining, the serial punctuation and pubescence distinct, the latter unicolorous, the interstices at the base scarcely elevated. Axillary space small, but the coxal line abruptly reflexed and continued along the metasternum, as a fine line very close to the side-piece, for more than half the length of the breast.

This species will be easily recognized by the peculiar coxal line; we appear not to have received a male.

7. **Stelidota stictica,** sp. n.

Ovalis, minus convexa, nigricans, elytris vage maculatis, antennis pedibusque fuscis, illarum basi, harum tarsis rufis; prothorace marginibus reflexo-explanatis; elytris seriatim longius pubescentibus, pubescentia variegata, interstitiis alternis subdepressis.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Thorax deeply emarginate in front; base bisinuate; sides largely explanate; surface not densely punctate. Elytra with the serial punctuation distinct, the series of hairs rather long and each variegate, dark hairs being succeeded by light hairs two or three times in each series, the alternate interstices evidently a little more elevated than the others. Axillary space small; coxal line abruptly reflexed, but continued for only a short distance backwards.

We have received only two females of this species; it may be recognized by the

variegate serial pubescence. In some respects the insect agrees with Erichson's description of *S. alternans*, but he says that in it the rows of setæ are one light, the next dark.

8. **Stelidota alternans.**

Stelidota alternans, Er. in Germ. Zeitschr. iv. p. 303 [1].

Hab. MEXICO [1], Jalapa (*Höge*); GUATEMALA, Coban (*Champion*).

We have not received any examples that agree thoroughly with Erichson's description of *S. alternans*; the specimens I have seen so named do not exhibit the alternate variegation of the serial pubescence alluded to by Erichson. In our National Collection at South Kensington there is an example differing from anything we have received, and named by Murray as *S. alternans*, Er.; it is not certain, however, that this specimen is really from Mexico, as it purports to be. Reitter (Verh. Ver. Brünn, xii. 1, p. 14) gives *S. alternans* as a variety of *S. octomaculata* (Say); but I have no doubt this is incorrect, *S. octomaculata* being a very distinct species of the *S. chontalensis* group with simple posterior tibiæ in the male.

9. **Stelidota bugabensis,** sp. n. (Tab. X. fig. 5, ♀.)

Ovalis, minus lata, convexa, nitida, ferruginea; prothorace lateribus sat explanatis, basi utrinque parum sinuata; elytris tantum ad apicem sulcatis, seriatim subtiliter punctatis, longius pubescentibus.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Thorax coarsely punctured; the sides somewhat expanded but not in the least reflexed, their posterior third nearly straight, the hind angles rectangular. Elytra with the series of punctures very fine; the serial pubescence rather long, the outer one of each pair of the series strongly separated from the inner, so as to be nearly equidistant from it and the next series; the interstices shining. The axillary space moderately large, the line bounding it remarkably coarse and distinct.

This species seems quite distinct from any of our others, though to a considerable extent intermediate between *S. solitaria* and *S. chontalensis*; it is readily distinguished from the former by the different serial pubescence, and from the latter by the shape of the thorax. We have received only one female.

10. **Stelidota** —— ?

Hab. GUATEMALA, Capetillo (*Champion*).

A female example of a *Stelidota* from Capetillo agrees with *S. bugabensis* in many characters, especially in form, sculpture, and pubescence, and in the structure of the axillary space; but is considerably larger, and has the thorax more convex transversely and less expanded at the sides.

11. **Stelidota fortis,** sp. n.

Oblongo-ovalis, convexa, nigra, antennis pedibusque piceo-rufis, tarsis dilutioribus; elytris ad basin vix sulcatis, seriatim minus breviter pubescentibus.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Thorax not explanate at the sides except in front, the sides in front greatly rounded and narrowed, the base slightly sinuate on each side, the surface densely and deeply punctate. Elytra with the interstices scarcely elevated except behind, but with the serial pubescence rather long; the serial punctuation coarse, and so close as to be in some places rather irregular. Axillary space of the metasternum unusually elongate.

The individuals are larger than those of any other species of the genus I have seen. We have received only two specimens; I think they are the sexes; if so the male tibiæ only just perceptibly differ from those of the female.

Found, like most of its congeners, in rotten fruit.

12. **Stelidota clavigera,** sp. n.

Oblongo-ovalis, convexa, nitida, fusco-testacea; antennis nigris, basi rufa, clava majore; elytris leviter sulcatis.
Long. $2\frac{3}{4}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ with the club quite black and larger than usual. Thorax very convex, with the sides narrowly explanate, the base not sinuate, the hind angles rectangular. Elytra with the serial punctuation distinct; the serial pubescence is rather long, the outer of the two rows of hair forming each series very obsolete and placed near the inner, so that at first sight the series appear each to be formed of a single row of hairs; the interstices are a little elevated even at the base. The axillary space is quite small. The hind legs of the male are but little curved, while the apical dilatation extends half the length of the tibia.

13. **Stelidota chontalensis,** sp. n.

Oblongo-ovalis, minus lata, convexa, piceo-ferruginea, antennarum basi pedibusque testaceis, elytris ad basin et ultra medium vage rufo-maculatis; prothorace basi truncata, lateribus haud explanatis; elytris obsolete sculpturatis, tantum ad apicem sulcatis, seriatim regulariter, subtiliter pilosis.
Long. 2–$2\frac{1}{2}$ millim.

Hab. Nicaragua, Chontales (*Janson*).

Antennæ infuscate externally. Thorax not much emarginate in front, the anterior angles very little prominent, the sides straight behind, the surface very convex transversely, the sides not at all explanate, the base nearly straight, the hind angles rectangular; rather deeply and coarsely, not densely punctate. Elytra with the serial

punctuation very obsolete; with regular series of erect short pubescence, each series consisting of a single row, but midway between each pair with an indistinct series of shorter hairs; costate at the apex only; fuscous, with the apex, a spot at the base of each, and another beyond the middle vaguely red. Under surface more or less infuscate. Axillary space large, the coxal line being externally greatly deflexed. Male with the hind tibiæ almost simple, very slightly curved and feebly dilated at the apex.

We have received a good series of this inconspicuous insect.

14. **Stelidota championi,** sp. n. (Tab. X. fig. 6, ♂.)

Minor, oblongo-ovalis, minus lata, convexa, ferruginea, elytris fuscescentibus, ad basin et ultra medium vage ferrugineis; prothorace basi fere truncata, lateribus haud explanatis; elytris obsolete sculpturatis, tantum ad apicem sulcatis, seriatim regulariter pilosis.

Long. 2 millim.

Hab. MEXICO, Jalapa, Cordova, Cerro de Plumas (*Höge*), Cuernavaca, Teapa (*H. H. Smith*); GUATEMALA, Capetillo, San Gerónimo, San Juan in Vera Paz (*Champion*); PANAMA, Bugaba (*Champion*).

This species closely resembles *S. chontalensis*, but it has the axillary space small, and the male has the hind tibiæ simple, and straight even along the inner margin. The thorax is not quite so free from curvature at the sides as it is in *S. chontalensis*, and the base is perceptibly sinuate on each side near the angle.

15. **Stelidota extranea,** sp. n. (Tab. X. fig. 7, ♀.)

Oblongo-ovalis, subdepressa, fusca, supra fusco-testacea, limbo testaceo; prothorace lateribus late explanatis; elytris irregulariter, fortiter, parum profunde, punctatis.

Long. $3\frac{7}{8}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Although very dissimilar in appearance from the typical species of the genus, this insect shows no remarkable structural differences, the most important being, so far as I can see, that all the coxæ are less widely separated; the sculpture of the upper surface and the form of the thorax are the characters that give rise to its peculiar facies. The thorax is very deeply emarginate in front, the base is quite straight, the hind angles definite, slightly obtuse, the sides expanded, the surface a little uneven, coarsely but not at all deeply punctate. Scutellum triangular. Elytra fuscous on the disc, but vaguely marked with yellow, which is the predominant colour at the margins; the surface is coarsely punctate, and there is a very scanty irregularly distributed pubescence. The male has the apices of the middle and hind tibiæ a little incurved. Two specimens.

PROMETOPIA.

Prometopia, Erichson, in Germar's Zeitschr. iv. p. 279 (1843).

This genus includes a few species found in North, Central, or South America; and Murray has assigned to it one from West Africa.

1. **Prometopia porcina,** sp. n. (Tab. X. fig. 8.)

Latiuscula, suboblonga, depressa, subtus rufescens, supra nigricans, margine rufa, elytris rufo-quadriguttatis, antennis pedibusque rufis; nitidula, parce setosa.

Long. $6\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Third joint of antennæ very long. Mandibles very stout. Head very large, densely punctate, with a few larger setigerous punctures; depressed in front. Thorax broad and short, very strongly transverse, but little narrowed in front; anterior angles very prominent and acute; shining, sparingly and finely punctate, and with almost equally numerous larger, setigerous punctures distributed over the surface. Elytra shining, irregularly seriate-punctate, the interstices sparingly setose.

We have received only one specimen of this very distinct species. It was labelled "*Prometopia porcina*, Murr.," in Sallé's collection.

2. **Prometopia æqualis,** sp. n. (Tab. X. fig. 9.)

Oblongo-ovalis, subdepressa, fusca, limbo testaceo, elytris testaceo-variegatis; pube depressa vestita, subtiliter punctata; elytris apice truncato.

Long. $4\frac{1}{2}$–5 millim.

Hab. GUATEMALA, Chacoj, Torola (*Champion*); NICARAGUA, Chontales (*Belt*).

Thorax much rounded and narrowed in front, the lateral margins turned upwards, the sides only narrowly explanate, the hind angles slightly acute; the surface quite finely punctate, broadly yellow at the sides, the disc with a dark, vague, irregular pattern. Elytra short, truncate behind, so as to leave the large pygidium exposed; finely punctured, with a quite depressed, conspicuous, concolorous pubescence, the surface fuscous, much variegated with yellow.

Erichson's *P. confluens*, according to his description, agrees with this species in the form of the elytra; but is testaceous in colour, and, apparently, more depressed and more delicately pubescent.

3. **Prometopia rauca,** sp. n.

Breviter ovalis, subdepressa, fusco-testaceo-variegata, pubescentia rigida depressa vestita, parce minus subtiliter punctata, nitida; elytris apice rotundato.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, Pantaleon (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Closely resembling *P. æqualis*, but smaller, with a more scanty and coarse pubescence, and the apices of the elytra rounded, the pygidium being thus nearly covered.

4. **Prometopia cryptarchoides.**

Prometopia cryptarchoides, Reitter, Verh. Ver. Brünn, xii. 1, p. 51 [1].

Hab. MEXICO [1], Parada (*Sallé*); GUATEMALA, Las Mercedes, Guatemala city, Zapote (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

This insect has a fine and scanty pubescence mixed with the suberect coarse setæ of the thorax and elytra.

It is apparently the least rare of the *Prometopiæ* found in our region; we have received nineteen examples.

5. **Prometopia soronioides**, sp. n. (Tab. X. fig. 10.)

Oblongo-ovalis, minus depressa, fusco-testacea, pubescens, setulisque albidis micantibus adspersa; corpore limbo testaceo, elytris pone basin et ante apicem ferrugineo-quadriguttatis; prothorace lateribus rotundatis, fortiter explanatis.

Long. $3\frac{1}{2}$–4 millim.

Hab. GUATEMALA, San Gerónimo, Purula (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

This species is very distinct by the comparatively small eyes, the less elongate head, and the much shorter mentum; in its general shape and clothing it is more like *Soronia* or *Lobiopa*. Antennæ red, with the club fuscous. Thorax with the sides rounded, broadly explanate, the hind angles not acute, rather coarsely but obsoletely punctate, hispid. Elytra sparingly punctate, with a rough setosity which is gleaming-white on the pale marks, and with some distant coarser white setæ serially arranged.

P. soronioides bears a great superficial resemblance to *Lepiarcha omositoides*.

PLATYCHORA.

Platychora, Erichson, in Germar's Zeitschr. iv. p. 284 (1843).

The four species of which this genus is composed are equally divided between South America and West Africa.

1. **Platychora lebasi.** (Tab. X. fig. 11, ♂.)

Platychora lebasi, Er. in Germ. Zeitschr. iv. p. 285 [1].

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Capetillo, Pantaleon (*Champion*).—SOUTH AMERICA, Colombia [1].

PSILOTUS.

Psilotus, Fischer, Bull. Soc. Mosc. i. p. 48 (1829); Erichson, in Germar's Zeitschr. iv. p. 281.

This is one of the characteristic genera of Nitidulidæ of Tropical America. Although only about six species are known, they appear to be abundant as well as remarkable insects. They are found beneath the sappy bark of fallen trees.

1. **Psilotus cornutus.**

Nitidula cornuta, Fabr. Syst. Eleuth. i. p. 349[1].
Psilotus hoffmanseggii, Fisch. Bull. Soc. Mosc. i. p. 48, t. 1. figg. 9–11[2].
Psilotus cornutus, Er. in Germ. Zeitsch. iv. p. 283[3].

Hab. British Honduras, R. Sarstoon (*Blancaneaux*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).—South America[1], Cayenne[2], Pará[3].

2. **Psilotus atratus.** (Tab. X. fig. 12, ♂.)

Psilotus atratus, Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 105[1].

Hab. Mexico[1], Cordova (*Sallé*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

3. **Psilotus mimetes.** (Tab. X. fig. 13, ♀.)

Depressus, piceus, limbo dilutiore, antennarum basi pedibusque rufis; elytris seriatim fortiter punctatis, interstitiis seriatim griseo-setosis.
Long. $4\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Upper surface sparingly clothed with a distinct griseous setosity. Thorax coarsely punctured, the surface a little uneven, with a very small impression in front of the scutellum; this latter bears a few symmetrically arranged hairs. Elytra with series of large punctures, and with the interstices seriately setose.

We have received only one example, a female, of this species; it is distinguished from the others of the genus by the well-marked setosity of the upper surface. The specimen was mounted on a card with an example of *Perilopa punctigera*, to which it bears a considerable superficial resemblance. The mandibles of this specimen are shorter than those of the same sex of *P. atratus*; and it is probable, therefore, that the male has also smaller mandibles than those of the species mentioned.

PERILOPA.

Perilopa, Erichson, in Germar's Zeitschr. iv. p. 276 (1843).

This genus was established for one species from South America, and a second from the Cape of Good Hope. I have not had an opportunity of examining the South-African insect.

1. **Perilopa deplanata,** sp. n.

Rotundato-oblonga, parum convexa, disco planato, fere opaca, nigra, antennis pedibusque rufescentibus; elytris seriebus regularibus setarum erectarum.
Long. $5\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui, Caldera, San Miguel in the Pearl Islands (*Champion*).

Antennæ with large, subcircular basal appendage. Head with a transverse elevated line on the vertex. Thorax broad, but little emarginate in front, with coarse but very shallow punctuation, which is very dense on the disc, sparingly clothed with fine suberect hairs. Elytra quite flat on the disc, with very regular series of distant, erect, rather long, fine hairs of a fulvescent tint; between each series of hairs there are two irregular series of large but very shallow punctures; the interstices on which the hairs are placed are, when viewed from a suitable point, seen to be feebly grooved, each hair arising from a minute deep fovea (but these give rise to scarcely any appearance of a tuberculation of the interstices); the disc is quite flat, but immediately external to the seventh series of hairs the sides are abruptly deflexed. Under surface piceous, dull, impunctate; ventral segments black, shining, the fovea across the base of the last segment larger and deeper than those across the other segments. Male with the clypeus tuberculate in the middle; upper apical cusp of the left mandible dilated and rounded, the right mandible with the corresponding cusp elongated and turned abruptly upwards so as to form a rather long, erect tooth.

This very distinct species will be readily recognized by the distinct duplication of the series of punctures between the rows of setæ, and by the peculiar structure of the mandibles of the male. It was found not uncommonly under bark, and exhibits but little variation. The unique example from the Pearl Islands differs slightly in sculpture from the other specimens, and may possibly belong to a different species.

2. **Perilopa punctigera,** sp. n. (Tab. X. fig. 14.)

Rotundato-oblonga, parum convexa, disco planato, nigra, limbo picescente, antennis pedibusque rufescentibus; supra setosa, elytris interstitiis subelevatis, nitidis, quasi subtuberculatis.
Long. 4–$4\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui, Caldera, David (*Champion*).

Closely allied to *P. deplanata*, but readily distinguished by the sculpture of the upper surface, and the more distinct tuberculation of the thorax and elytra. The sculpture of the latter consists of duplicate series of punctures; the slightly raised interstices are quite shining, and, at the points where the serial setæ are inserted in their minute foveæ, appear to be obsoletely tuberculate. I cannot detect any peculiarity to indicate which are males of *P. punctigera*, though we have received a good series of the species. It exhibits some variation in sculpture: in some examples the interstices are more

elevated, and at the same time the serial punctuation is less distinct. Our figure is taken from a specimen of this kind.

3. **Perilopa placida,** sp. n. (Tab. X. fig. 15.)

Subelliptica, ferruginea, depressa, breviter setulosa, subopaca; elytris seriebus omnino regularibus punctorum majorum, interstitiis regulariter confertim setosis, ad apicem magis elevatis.

Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, San Gerónimo, Chiacam (*Champion*); Panama, Volcan de Chiriqui, Caldera, David (*Champion*).

Thorax deeply emarginate in front, densely sculptured, but with the sculpture shallow and very indistinct. Elytra with perfectly regular series of closely placed shallow punctures, these punctures large and each perfectly circular; the interstices are broad, and each bears a quite regular series of short recurved setæ; the four or five interstices next the suture are each at the extremity a little compressed and elevated so as to be subcarinate. Axillary line of the metasternum very definite.

We have received seven examples of this species. It varies in colour from ferruginous to black. It is extremely similar to *P. peltidea*, Er.; but in that South-American insect the serial punctures are rather larger and deeper, and are so closely placed that behind the middle of the elytra they are, as it were, compressed and no longer round, but with the front part of each puncture indistinct.

LOBIOPA.

Lobiopa, Erichson, in Germar's Zeitschr. iv. p. 291 (1843)[1].
Soronia (pars), Reitter, Verh. Ver. Brünn, xii. 1, p. 46[2]; Horn, Trans. Am. Ent. Soc. vii. p. 306.

Lobiopa has been united with *Soronia* by Reitter[2] and Horn, but I think incorrectly so. The distinction between the two in the structure of the antennary grooves, though not great, is undoubted, and quite sufficient for their separation; but there exists, in addition, another character, viz. that in *Lobiopa* the epipleuræ of the elytra do not extend round the apex, while in *Soronia* they are continued at the tip to the suture. *Amphotis* and *Phenolia*, which were established by Erichson, are also, I think, good genera, though Horn has united the one, Reitter the other, with *Soronia*.

Lobiopa, as limited by Erichson, is peculiar to the New World, ranging from North America to Brazil and including the Antilles. The number of species is quite uncertain, as the specific limits are not easy to ascertain, the attempt to do so having indeed been as yet scarcely made. About twenty species have been described; only one is at present recognized as North American, but it is doubtful whether there are not more there.

1. **Lobiopa retusa,** sp. n. (Tab. X. fig. 16.)

Rotundato-ovalis, convexa, ferruginea, elytris flavis, in disco et ad apicem ferrugineis, ad basin piceo-maculatis; prothorace anterius leviter declivo, ante medium obsolete tri-impresso.
Long. 9 millim.

Hab. NICARAGUA, Chontales (*Belt*).

Mandibles abruptly curved at the extremity. Thorax convex, with only a slight explanate portion at the lateral margin, sparingly punctate, depressed in front on the middle, and behind the depression with three feeble impressions. Elytra explanate at the sides, but not strongly, rather sparingly punctate, the serial setosity fine and scanty, the other pubescence very scanty; yellow in colour, with a dark mark behind the scutellum, some dark spots on each side near the base, and a common flammulate ferruginous mark on the disc, the extremity broadly ferruginous. Legs stout, the femora deeply sulcate for the reception of the tibiæ. Front tibiæ a little dilated at the apex, the tarsi rather less slender than in the other species of the genus. Prosternum deeply impressed along the middle.

Of this very distinct species we have received only two badly preserved examples. The subretuse front of the thorax distinguishes it from all the other known members of the genus.

2. **Lobiopa undulata.**

Nitidula undulata, Say, Journ. Ac. Phil. v. p. 179[1].
Soronia undulata, Horn, Trans. Am. Ent. Soc. vii. p. 308[2].

Hab. NORTH AMERICA[1 2].—MEXICO, Northern Sonora (*Morrison*).

The two individuals found just within our northern boundary that I refer to this species differ from some of the varieties of *L. decumana* only in the eye, as seen on the underside of the head, being considerably narrower and less convex.

L. setulosa, Lec. (nec Er.), has been united with *L. undulata* (Say), but perhaps may prove distinct; it has not been detected within our limits.

3. **Lobiopa decumana.**

Lobiopa decumana, Er. in Germ. Zeitschr. iv. p. 295[1].

Hab. MEXICO, Cuernavaca, Vera Cruz (*Sallé*), Cordova (*Sallé, Höge*), Jalapa (*Flohr, Höge*); BRITISH HONDURAS, R. Hondo, R. Sarstoon (*Blancaneaux*); GUATEMALA, Panajachel, Zapote, Capetillo, San Gerónimo, Sabo, Panzos (*Champion*); NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA, Cache (*Rogers*); PANAMA, Bugaba, Volcan de Chiriqui 3000 feet, Caldera, David, Taboga Island (*Champion*).—SOUTH AMERICA, Demerara (*Harper*); ANTILLES, Cuba[1].

This species is common in our region, and is most variable in size, colour, pattern, and outline, but I am unable to find any constant character for specific division.

The variation does not seem to depend altogether on locality, though it is decidedly different in Chiriqui from what it is in Mexico. Varieties occur so closely resembling *L. simulatrix* and *L. cassidoides* in colour, size, and form, that I am able to discriminate them only by the absence of certain points that I have considered characteristic of those species, and these varieties occur in the same localities as the species they resemble. Whether all the numerous forms I have referred to *L. decumana* really pertain to one species is still doubtful to me, though, as I have remarked above, I fail to find any satisfactory distinctive characters. Three South-American species described by Erichson as distinct are now united with *L. decumana* in the Munich Catalogue.

4. **Lobiopa cassidoides,** sp. n.

Ovalis, convexa, subtiliter pubescens, parce setulosa, fusco-testacea, capite fusco; corporis limbo minus late explanato.

Long. 4–5 millim.

Hab. GUATEMALA, Cerro Zunil, Zapote (*Champion*); PANAMA, Volcan de Chiriqui between 4000 and 6000 feet (*Champion*).

The punctuation of the upper surface is almost equally dense all over, and the punctures are not serially arranged even near the sides of the elytra; the setæ are rather thick, regularly arranged. The punctuation of the under surface is quite fine and scanty.

In this species there is a comparatively large lobe behind the eyes, on the under surface of the head: this renders the recognition of the species certain. Moreover, the mentum and the parts of the head behind it bear some fine, suberect, silky pubescence; and the front tarsi are more dilated than in *L. simulatrix*. I have not observed a similar pubescence on the underside of the head in any other species of *Lobiopa*; but it is not very conspicuous, and to be sure of its existence and nature must be looked at laterally.

This species is also a variable one. A considerable series received from Chiriqui do not vary much, except in size, and these I have treated as the typical form. One example from Cerro Zunil and two from Zapote agree fairly well with this typical form; but the other examples from these two localities are very decidedly different, the form being more convex, and the punctuation rather coarser and more distant, and each elytron bearing a large blackish basal mark extending backwards for about half its length.

5. **Lobiopa simulatrix,** sp. n. (Tab. X. fig. 17, ♂.)

Parva, ovalis, sat convexa, testacea, minus picturata fere unicolor, fortiter punctata; elytris seriatim parce setosis, lateribus anguste explanatis.

Long. 4–4½ millim.

Hab. MEXICO, Colima city, Jalapa (*Höge*); GUATEMALA, Teleman (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).

Under this name I separate some examples that, besides being smaller than the smallest individuals of *L. decumana*, differ in the sides of the elytra being less explanate, the epipleuræ narrower, and the eyes beneath shorter in the longitudinal direction, and therefore approaching a semicircular form. These examples more nearly resemble *L. cassidoides*, but they have the disc of the thorax more coarsely and not quite so closely punctured, and the erect pubescence on the mentum and gula is not present, and the lobe behind the eye is small. *L. præcox*, Er. (Germ. Zeitschr. iv. p. 297), from Brazil, may possibly be a variety of either *L. simulatrix* or *L. cassidoides*, but I think from the description it is more probably a distinct species. In *L. simulatrix* and *L. cassidoides* the lobes over the insertion of the antennæ are much less prominent than they are in *L. decumana*.

6. **Lobiopa discedens,** sp. n. (Tab. X. fig. 18, ♂.)

Suboblonga, parallela, parum convexa, picescens, antennis pedibusque piceo-rufis, elytris ferrugineo-variegatis; prothorace dense æqualiter punctato; elytris subrugulose punctatis; corpore limbo minus late explanato sed intra marginem magis depresso.

Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Basal appendage of antennæ large; eyes large and conspicuous. Thorax rather deeply and abruptly emarginate in front; sides a little narrowed towards the front, but, except for this, nearly straight, rather deeply and definitely depressed within the lateral margin; the surface closely and evenly punctured, very finely pubescent, with two or three vague depressions near each side. Elytra rather closely and finely but subrugosely punctate, the serial setæ fine and curvate; variegated with some red marks near the base and beyond the middle; and, like the thorax, deeply depressed within the lateral margin. Prosternum not at all impressed between the coxæ. Legs rather widely separated. Male with the inner margin of the hind tibiæ excised at the base.

This species was procured in considerable numbers. It is perhaps entitled to generic distinction owing to the abdominal lobe between the hind coxæ being broad and truncate, and the inner epipleural margin continued to the suture, the epipleura being in this part, however, so narrow that there is only just space on it for a series of fine punctures.

SORONIA.

Soronia, Erichson, in Germar's Zeitschr. iv. p. 277 (1843).

This genus, after subtraction of *Phenolia*, *Lobiopa*, and *Amphotis*, which have been included in it, will comprise eight or nine species distributed in the Palæarctic and Nearctic Regions, and with species in New Zealand and New Caledonia, which latter, however, will have to be removed. It is doubtful whether *Soronia* really occurs within our limits.

1. Soronia rectangula.

Seronia rectangula (sic), Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 102 [1].

Hab. Mexico, Teapa [1].

Reitter, who united *Lobiopa* with *Soronia*, states [1] that *S. rectangula* is a true *Soronia*, but I greatly doubt whether he was correct in so doing. If the insect is really a *Soronia* I am certainly unacquainted with it; if not, it may be *L. discedens*.

CACCONIA, gen. nov.

Sulci antennarii parum convergentes. Palpi labiales dilatati. Prosternum inter coxas rotundatum, haud prolongatum. Tarsi elongati, lineares.

I establish this genus for a species of which we have received but a single exponent. The parts of the mouth are small, the mentum very small. The eyes as seen beneath are small, subhemispheric. The antennary grooves are sharply defined internally by a raised line which extends backward along the large submental area; but externally they are not definitely limited, though there is a large depressed space behind the eye. There are no antennary lobes, so that on the upper surface the base of the antenna is quite exposed. The mandibles are concealed by the labrum, which is moderately large, feebly emarginate in front. The front coxæ are large, transverse, not at all prominent; the prosternum is gently bent upwards in a curve behind the coxæ, and its apex is concealed, not prominent. The legs are slender, the femora not grooved beneath, the tarsi long and slender, the claws large. The hind coxæ are not widely separated.

Cacconia differs from *Soronia* and *Lobiopa* by the want of antennary prominences and by the prosternum being curved upwards behind the coxæ; it agrees with *Lobiopa* in the epipleuræ being not continued along the apex to the suture. In the structure of the head and antennæ it comes nearer to *Phenolia*, but differs from that genus in the unmargined femora, the more approximate coxæ, and the form of the apical portion of the epipleuræ.

1. Cacconia obscura, sp. n. (Tab. X. fig. 19.)

Breviter ovalis, subconvexa, irregulariter punctata, parce minus subtiliter pubescens, sordide testacea; prothorace irregulari, lateribus explanatis.

Long. 4 millim.

Hab. Mexico, Jalapa (*M. Trujillo*).

Antennæ with the first joint a little dilated, much longer than broad, the club elongate, infuscate. Thorax deeply emarginate in front, the anterior angles obtuse, the surface irregular, the sides explanate, the punctuation rather coarse, moderately close. Scutellum rather large, impunctate. Elytra with feeble indications of longitudinal costæ, coarsely, irregularly punctate, the punctuation obsolete towards the suture; among the scanty hairs there are a few, differing but little from the others, arranged in a serial manner.

Subfam. *STRONGYLINÆ.*

Although Murray has demonstrated (Ann. & Mag. Nat. Hist. 3rd ser. xix. p. 169) the impossibility of separating the Strongylinæ and Nitidulinæ as defined by Erichson, I nevertheless retain the two subfamilies, because by changing the definitions and transferring a few genera from the Nitidulinæ to the Strongylinæ a natural and useful arrangement may be made. The Strongylinæ will include all those forms in which the prosternum and mesosternum are co-adapted to admit a greater or less degree of contraction of the body, and will include two or three distinct groups. These I cannot deal with at present, as there are numerous genera not represented in our region.

MELIGETHES.

Meligethes, Stephens, Ill. Brit. Ent. iii. p. 45 (1830); Erichson, in Germar's Zeitschr. iv. p. 309.

Meligethes is eminently a palæarctic genus and very rich in species. It has also a few representatives in North America; but the one found just within the limits of our region is one of the most abundant European insects that has spread over a portion of the North-American continent.

In accordance with the views expressed in the note under the heading Strongylinæ I transfer *Meligethes* to this subfamily, where indeed it was originally placed by Erichson himself.

1. Meligethes æneus.

Nitidula ænea, Fabr. Syst. Ent. p. 78[1].
Meligethes æneus, Er. Ins. Deutsch. iii. p. 173[2].
Meligethes rufimanus, Lec. Pacific Railr. Rep. 1857, App. 1, p. 37[3]; Horn, Trans. Am. Ent. Soc. vii. p. 313[4].

Hab. EUROPE passim.—NORTH AMERICA, California, Oregon[4].—MEXICO, Northern Sonora (*Morrison*).

I see no means of distinguishing North-American from European examples, and as Horn has already suggested that they belong to the abundant *M. æneus,* I unite the specimens from both countries under the older name. In some recent catalogues the species is cited as *M. brassicæ,* Scop.; but it is not advisable to adopt this change of name until the grounds on which it is proposed have been thoroughly investigated, and it is recommended by use in a standard work.

CAMPTODES.

Camptodes, Erichson, in Germar's Zeitschr. iv. p. 321 (1843)[1]; Reitter, Verh. Ver. Brünn, xii. 1, p. 101[2].

Camptodes is peculiar to the New World, where it extends from Northern Mexico southwards throughout the warmer regions, but has not yet been found in Chili nor, I

believe, in Uruguay. In the tropical regions of America it is apparently extremely rich in species. Erichson [1] in 1843 described thirty-nine, and Reitter [2] in 1873 distinguished seventy-four. We have to record about fifty species from our region, a large majority of which are new.

The specific characters have not yet been well defined; and I have experienced great difficulty in discriminating them in the material our editors have procured. This is chiefly owing to the very peculiar characters of the sexes: the males of many species differ greatly from the females in size, shape, and sculpture; and these sexual distinctions not only vary from species to species, but in some cases are inconstant even within the limits of a single species, the smaller males differing but little from the females, while the larger specimens of the sex in question may be so different in size and sculpture as to suggest at first that they belong altogether to another species. Therefore before attempting to determine the species the sexes should be distinguished. This can nearly always be done by an inspection of the apex of the hind body: the male has an internal supplementary segment, and though this cannot be itself detected in the normal state, yet its extremity is fringed with long hairs which can be perceived projecting externally between the dorsal and ventral plates of the last segment; usually, too, this sex has the hind margin of the last ventral plate depressed, and more densely ciliate than it is in the female; but this latter character must not be implicitly trusted, for in some species the females have these parts much more ciliated than usual, and in one or two even develop on the middle of the extremity of the last ventral plate some projecting hairs which look like the pubescence attached to the supplementary segment of the male. The true supplementary segment, or the extremity of the œdeagus, or both, are not infrequently a little extruded, and the individual may thus be distinguished as a male; but in the case of *C. masculinus* the female has a small chitinous process on the middle of the hind margin of the last ventral plate simulating the projecting apex of the male organs. In case of doubt existing as to the sex of an individual, a needle should be used, after the specimen has been softened, to separate the dorsal and ventral plates, and then the male supplementary segment, if the individual be of the male sex, will be detected closely attached to—in fact duplicating the edge of—the last dorsal plate.

The female characters, so far as I have observed, are constant and without variation; the most remarkable of the positive characters of this sex being a greater or less elongation of the wing-cases, with sinuation or prolongation of their apices; but this occurs only in a comparatively small number of species.

As the species have been distinguished by previous writers chiefly by colour and sculpture, and as the former of these characters is apparently in some cases very variable, and as the latter is liable to great sexual variation in the male, it is almost impossible to determine with certainty from the descriptions what are the species to which they are intended to apply; thus I have not ventured to identify by description

alone any of our species with insects described from South America. The number of species really common to our region and to South America appears, however, so far as collections at present enable one to judge, to be very small; indeed only two or three are known to me as common to the two regions. I have seen, however, no *Camptodes* from Venezuela.

The genus has been divided into two sections by Erichson by means of the structure of the claws, which in some species have a rather large lobe at the base, while in others the lobe is small or altogether absent. This character, though of importance, does not satisfactorily divide the genus into two groups, and I have therefore abandoned it, using in preference some other characters. Indeed, by two or three minor structural characters the genus is so sharply divided into two sections that I have little doubt the two will ultimately be considered distinct genera. I have at present, however, treated them only as subgenera, giving a fresh name to the section with fewer species, and reserving Erichson's title specially for the division containing the larger number of species.

In addition to those enumerated below we have received a few specimens, which more or less certainly represent other species; these I have not thought it proper to attempt to characterize with insufficient material.

All the species of *Camptodes* are, I believe, found on flowers, and some of them appear to be common insects, though many are very rare.

Subgen. nov. Eucamptodes.

Metasternum much produced in the middle between the intermediate coxæ, its front margin indistinct or interrupted there; terminal joint of antennæ pointed; sutural stria of elytra placed at a distance from the suture, the sutural interstice more or less punctate. (Species 1–19.)

1. **Camptodes principalis,** sp. n.

Rotundatus, convexus, læte rufus, capite prothoraceque nigris nitidis, hoc ad basin utrinque rufo-maculato; elytris læte viridibus, crebre sat fortiter punctatis.

Long. capite inflexo 7 millim.

Hab. Mexico, Jalapa (*Höge, M. Trujillo*).

Antennæ red, with the club concolorous. Thorax shining black, with a large red mark on each side at the base, very sparingly and finely punctured. Elytra rather coarsely punctate, with traces of striation between the punctures. Pygidium coarsely punctate. Male with the pubescence on the mentum, submentum, and front of prosternum longer and denser, and the hind margin of the last ventral plate bisinuate; in this sex the extremity of the hind body exhibits in the middle some longer pubescence, the pubescence being attached to the extremity of the supplementary segment, which, except for this, is quite internal.

Herr Höge procured a fine series of this handsome insect; the specimens exhibit but little variation, and the species can always be distinguished from *C. illustris* by the larger size, the quite concolorous club of the antennæ, and the diminished punctuation of the prothorax at the sides.

2. **Camptodes illustris.**

Strongylus illustris, Chevr. Col. Mex. Cent. i. fasc. 3, no. 43 [1].
Camptodes illustris, Er. in Germ. Zeitschr. iv. p. 329 [2].

Hab. MEXICO [1 2], Ventanas in Durango 2000 feet (*Höge*, *Forrer*), Acapulco in Guerrero (*Höge*), Jalapa (*Höge*, *M. Trujillo*), Cordova, El Mirador, Vera Cruz (*Sallé*).

This species varies much in size and colour; the elytra are usually of a rather obscure green colour, this varying to purplish-black; specimens are also found in which the upper surface is dull owing, apparently, to a greater development of the excessively minute sculpture which the thorax and elytra bear in addition to their more scattered and coarse punctuation. In the male the hind margin of the last ventral segment is bisinuate, while in the female it is rounded.

We have received a good series of this species; the examples from Ventanas—seven in number—are all very aberrant and vary greatly in size; there is considerable variation also in the large series from Jalapa; from the other localities only single examples have been received.

3. **Camptodes championi,** sp. n.

Rotundatus, convexus, rufo-testaceus, antennarum clava, prothorace disco scutelloque nigris; elytris læte cyaneis.
Long. $5\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Distinguished from *C. illustris* by the red thorax, which is broadly black along the middle; the vertex of the head also is black; the thorax is very finely punctate. In other respects like *C. illustris*, so far as I can judge from the two females which are all we have received of this species.

4. **Camptodes formosus,** sp. n. (Tab. X. figg. 20, ♂; 20 *a*, antenna.)

Rotundatus, convexus, subtus rufo-testaceus, prosterno medio pectoreque fuscis, supra cyaneus (vel viridis), prothoracis capitisque limbo rufo-testaceo, antennis rufis, clava fusca; capite, prothorace elytrisque sat crebre fortiter punctatis.
Long. 4 millim.

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*), Teapa (*H. H. Smith*), Yucatan (*Sallé*), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, San Gerónimo, Cahabon, Chiacam, and San Juan in Vera Paz (*Champion*).

Var. Supra fere omnino viridi-cyaneus, prothorace ad latera anguste flavescente.

Hab. PANAMA, Bugaba (*Champion*).

Closely allied to *C. illustris*, but may be distinguished by a glance at the colour of the sides of the thorax; the male possesses a peculiar character, inasmuch as the mentum and submentum, besides being pubescent, are finely punctate and opaque; the prosternum between the front legs is very broad.

We have received seventeen specimens which come under the above definition; it is certainly a variable species as no two individuals are exactly alike, and there is a great difference in size and colour between the extreme forms. The most remarkable variety is the one alluded to above, of which we have received one female example from Bugaba. Our figure represents a male found in British Honduras by Blancaneaux.

This species was ticketed *C. formosus*, Blanch., in Sallé's collection, but does not appear to have been described.

5. Camptodes metallicus.

Camptodes metallicus, Reitter, Verh. Ver. Brünn, xii. 1, p. 112[1].

Hab. Mexico[1], Cordova, Playa Vicente (*Sallé*).

This species cannot be confounded with any other of the genus, owing to the brilliant unicolorous metallic colour of the upper surface. This colour in the examples before me is either blue, green, or golden.

6. Camptodes morio.

Camptodes morio, Er. in Germ. Zeitschr. iv. p. 225[1]; Reitter, Verh. Ver. Brünn, xii. 1, p. 103[2].

Hab. Mexico[2], Ciudad in Durango, Matamoros Izucar (*Höge*), Acapulco (*H. H. Smith*, *Höge*), Tierra Colorada 2000 feet (*H. H. Smith*), Jalapa (*Deppe*[1], *Höge*), Cordova (*Sallé*); Guatemala, San Gerónimo (*Champion*).

Var. α. Subtus (cum abdomine et pygidio) pedibusque rufis.

Hab. Mexico, Jalapa (*Höge*), Temax in North Yucatan (*Gaumer*); Guatemala, Zapote, Capetillo, Dueñas, San Gerónimo, Tocoy, San Juan in Vera Paz (*Champion*), Aceytuno 5000 feet (*Salvin*).

Var. β. Subtus cum pygidio rufus; pronoto rufescente.

Hab. Mexico, Tuxtla (*Sallé*), Jalapa (*Höge*), Temax in North Yucatan (*Gaumer*); British Honduras, Belize (*Blancaneaux*).

I think there is no doubt that this is a single species variable as to colour (the variations being rather different in different localities); after prolonged examination I fail to find any constant character to distinguish the varieties, and the œdeagus of a typical specimen from Jalapa proves to be similar to that of one of the var. α from San Gerónimo. This insect in its typical form appears to be common at Jalapa, and there also varieties have occurred sparingly. In Guatemala the var. α is the prevalent

form, but Mr. Champion obtained two specimens of the typical form at San Gerónimo. The series sent by Gaumer from Temax constitutes a variety intermediate between the typical form and the var. β. Besides the variation in colour, there is very great difference in size; in the contracted condition the largest examples are about five, the smallest about three, millimetres in length.

7. **Camptodes gaumeri,** sp. n. (Tab. X. figg. 21, ♀; 21 *a*, labrum and mandibles.)

Rotundatus, convexus, sat nitidus, rufus, capite elytrisque nigricantibus, his vix submetallescentibus, prothorace scutelloque quam elytra parum dilutioribus, sublævigatis.

Long. 5 millim.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

Antennæ sordid yellow, the club infuscate. Head sparingly, moderately coarsely, punctured. Thorax ample, transversely very convex, sparingly and extremely finely punctured, not altogether shining. Elytra sparingly, somewhat coarsely, punctured, with obsolete striæ between the punctures. Pygidium fuscous, nearly impunctate. Underside and legs red.

Gaumer procured a very large series of this species; the punctuation in it varies very little, and there is no doubt the insect is distinct. It greatly resembles certain specimens of var. β of *C. morio,* but may be distinguished by the very obsoletely punctured thorax and pygidium, and by the fact that the thorax is rather broader in front, so that the sides behind are curvate in a somewhat more longitudinal, less oblique, direction. There are also traces of the margin on the front of the metasternum being present: this cannot be seen in *C. morio.*

A ferruginous-yellow variety occurs, due perhaps partly to immaturity.

8. **Camptodes brevis.**

Camptodes brevis, Reitter, Verh. Ver. Brünn, xii. 1, p. 104[1].

Hab. Mexico[1].

I should have no hesitation in assigning one of the varieties (var. α) of *C. morio* to Reitter's description, were it not that the author says that the fine margin on the front of the thorax is broadly interrupted in the middle. I should not be surprised if this statement be due to an error of observation, for viewed in certain lights this appears to be the case in *C. morio* and *C. gaumeri,* though it is not really so.

9. **Camptodes tricolor.**

Camptodes tricolor, Er. in Germ. Zeitschr. iv. p. 326[1]; Reitter, Verh. Ver. Brünn, xii. 1, p. 103.

Hab. Mexico, Oaxaca (*Deppe*[1]).

I see nothing in the description that would not apply to a specimen of *C. morio*

intermediate between the typical form and var. α; but as we have not received any *Camptodes* with quite the coloration referred to, I must not treat the name as a mere synonym at present. A single specimen from Acapulco that I have placed, with some little doubt, as an aberrant example of the var. β of *C. morio* comes very near to the description, but does not exhibit so strong a contrast between the colour of the breast and that of the ventral segments; it is just possible that this specimen may be really distinct from *C. morio*, and also that it may be an example of *C. tricolor*, Er.

10. **Camptodes cinctipennis,** sp. n.

Latus, convexus, nigerrimus; elytris sanguineis, nigro-cinctis; antennis flavis, clava nigra.
Long. $6\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Closely allied to *C. morio*, but larger, different in colour, and distinguished from it and the other neighbouring species by the sutural stria being obsolete, though similar in its position; the punctuation differs but little from that of *C. morio*, being distinct and rather coarse, and the structural characters of the under surface are also apparently similar. The elytra are red, and have a definite black band along the outer margin—this commences at the shoulder, continues of one breadth for about half its length, when it is suddenly widened, and then becomes a little narrower again round the tip towards the suture; each elytron is greatly rounded at the apex. The pygidium is very coarsely punctured. One specimen only, of uncertain sex.

11. **Camptodes nigroviridis.**

Camptodes nigroviridis, Reitter, Verh. Ver. Brünn, xii. 1, p. 105 [1].

Hab. MEXICO [1].—SOUTH AMERICA, Brazil [1].

Var. Elytris nigro-cyanescentibus.
Camptodes nigrocyaneus, Reitter, l. c.[1]

Hab. MEXICO (*Chevrolat* [1]).

Reitter gives no distinction between these presumed species except that one has the elytra blue-black, the other blue-green; as this distinction is quite without importance in this genus I have no hesitation in uniting the two; and I am also of opinion that both will prove to be varieties of *C. morio*.

12. **Camptodes godmani,** sp. n.

Rotundatus, convexus, nitidior, rufo-testaceus, et scutello elytris viridescentibus marginibus externis rufescentibus, antennarum clava nigra.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Head and thorax distinctly, moderately closely, punctate, the punctuation of the latter not finer on the middle. Elytra very short and broad, rather sparingly punctate, between the punctuation with very minute definite sculpture on the parts near the suture. Pygidium rather closely but obsoletely sculptured, dull.

We have received a single male example of this elegant and distinct species; it has the mentum and submentum covered with long pale, silky pubescence.

13. **Camptodes divisus,** sp. n.

Rotundatus, convexus, nitidior, læte rufo-testaceus, scutello, elytris, mesosterno abdomineque nigerrimis. Long. 3 millim.

Hab. Mexico, Atoyac in Vera Cruz (*H. H. Smith*); Guatemala, Zapote (*Champion*). —South America, Brazil (*coll. Sharp*), Pará (*Mus. Brit.*).

Antennæ very short; club with the angle in the middle of the apical joint very obtuse. Head (with the antennæ, thorax, mesosternum, and legs) bright yellow-red. Thorax and elytra sparingly punctate. Mesosternal carina short.

We have received only two pairs of this pretty little insect; the female does not differ from the male except by the slight distinctions at the extremity of the hind body. The examples in the National Collection are labelled *C. nigripennis*, Er., but Erichson's species no doubt belongs to the subgenus *Camptodes*.

14. **Camptodes flohri,** sp. n.

Rotundatus, convexus, nitidus, rufo-testaceus, abdomine elytrisque nigris, his testaceo-plagiatis. Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Guadalajara (*Flohr*).

Antennæ short, red, the club not at all darker. Head and thorax sparingly punctured, bright red. Elytra black, with distant but not fine punctures, and each with a large yellow mark on the middle. Pygidium blackish, almost impunctate. Beneath, the front parts of the body are clear red, the metasternum is more obscure in colour, and the ventral segments are blackish. The prosternal process is extremely short, and becomes very much wider immediately behind the front coxæ.

I have only seen one specimen of this distinct species; when contracted, it looks like a *Litolibrus*.

15. **Camptodes collaris.**

Camptodes collaris, Reitter, Verh. Ver. Brünn, xii. 1, p. 109[1].

Hab. Mexico (*coll. von Bruck*[1]).

The description points to a species allied to *C. divisus*, but having a black head. We have not received any such insect.

16. **Camptodes politus,** sp. n.

Subhemisphæricus, supra nigerrimus, nitidior, subtus fusco-testaceus, pectore, abdomine pedibusque quatuor posterioribus nigris; antennis brevibus, testaceis, clava fuscescente; sparsim punctatus.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Zapote (*Champion*).

We have received only one specimen, a female, of this species, and, though it resembles *C. morio*, it is very distinct therefrom, so that there will be no difficulty in recognizing it. The upper surface is remarkably polished, sparingly punctate; the thorax is yellowish at the sides towards the front; the pygidium is sparingly and finely punctate, shining black. The prosternal process is small, the prosternum shorter than usual; the mesosternal carina is much more slender at the base than it is in *C. morio*; and the metasternal margin may be traced in the middle, though it is there both fine and obsolete.

17. **Camptodes nigriclava,** sp. n. (Tab. X. fig. 22, ♀.)

Subhemisphæricus, nitidus, ferrugineus, antennarum clava nigerrima; supra sparsim fortiter punctatus.
Long. $4\frac{1}{4}$ millim.

Hab. Mexico, Tapachula in Chiapas (*Höge*). — South America, Colombia (*coll. Sharp*).

This is another species of which we have received only one female example; though very like (except in colour) some of the varieties of *C. morio*, it is readily distinguishable by the intense black colour of the club of the antennæ in complete contrast to the rest of the surface; the club is also a little larger than usual. The legs, moreover, are all considerably more approximate than they are in *C. morio* or *C. gaumeri*. The upper surface is very shining, its punctuation rather coarse but distant; the punctures on the pygidium are few and subobsolete.

18. **Camptodes decipiens,** sp. n.

Rotundatus, convexus, ferrugineus, nitidus, parce subobsolete punctatus; stria suturali parum profunda; pygidio nitido, fere lævigato.
Long. 4 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Smaller than *C. nigriclava* and less distinctly punctured, and, besides, readily distinguished by the more pallid club of the antennæ; there are no punctures on the pygidium, but its surface is obsoletely aciculate.

C. decipiens is remarkably similar to *C. communis* and *C. cognatus* of the following section, but the sutural stria and the lobing of the tarsi are quite those of this group; the margin of the metasternum is present though only slightly raised and inconspicuous. Two male specimens.

19. **Camptodes aberrans,** sp. n. (Tab. X. figg. 23, ♀; 23 *a*, labrum and mandibles.)

Oblongo-ovalis, minus convexus, sat nitidus, niger, subtiliter punctulatus, pedibus fusco-testaceis; antennis testaceis, clava obscuriore.

Long. 4–5½ millim.

Hab. Mexico, Durango city, Esperanza (*Höge*), Etla, Puebla, Guanajuato (*Sallé*).

Var. Corpore subtus cum pygidio, toto, vel ex parte, testaceo.

This species seems to be variable as regards colour and punctuation, possibly to as great an extent as *C. morio*. It bears a considerable resemblance to *C. morio*, though different in form, and it has the apices of the elytra each much less rounded. It is, however, essentially distinguished from *C. morio* by the structure of the mandibles, which are stout at the apex, and there emarginate. The punctuation, like the colour, varies much, but it is always finer than it is in *C. morio*, and usually the striation on the elytra is more distinct. The pygidium is rather sparingly, moderately finely punctate.

We have received about twenty examples of the species; our figure is taken from a female of the dark form found at Durango city by Höge.

Subgen. Camptodes.

Metasternum but little produced in the middle between the intermediate coxæ, its front margin very distinct and continued completely across in a sinuate curve; terminal joint of antennæ emarginate or emarginate-truncate at the extremity; sutural stria of elytra placed very close to the suture, the sutural interstice impunctate. (Species 20–51.)

Group 1.

Front coxæ less widely separated, the prosternal process very short, rather abruptly wider just behind the coxæ; mesosternum with the carina not broader behind; metasternum depressed in the middle in front and finely margined. (Species 20–23.)

The species I place in this group are closely allied, with the exception of *C. melanopterus*; they have the scutellum of peculiar form, the apex being subtruncate and only obtusely angulate in the middle, but *C. melanopterus* differs in this respect. All are apparently rare and are variable in colour. The group is the centre of the genus, having affinities with the preceding and following groups. The claws are in an intermediate condition in regard to the size of the lobe at their base.

20. **Camptodes jucundus,** sp. n.

Rotundatus, convexus, nitidior, rufo-testaceus, pectore abdomineque fuscis, prothorace disco, elytrorum marginibus, late nigris.

Long. 4 millim.

Var. Prothorace elytrisque nigris, illo plus minusve vage rufo-marginato.

Hab. Guatemala, Zapote (*Champion*).

Antennæ red, the club rather small. Thorax finely and numerously punctate. Elytra scarcely more coarsely punctured than the thorax. Pygidium sparingly and finely punctate, but little exposed. Male with the thorax and elytra not so shining as they are in the female.

This is a more polished insect than *C. communis*, and is distinguished from it by important structural characters, the prosternal process being short, the middle coxæ less widely separated, and the metasternum a little depressed in front in the middle. The labrum is more elongate and the mandibles at the apex differently formed. Six examples.

21. **Camptodes transversus.**

Camptodes thoracicus, Er. in Germ. Zeitschr. iv. p. 329 [1].
Camptodes transversus, Reitter, Verh. Ver. Brünn, xii. 1, p. 107.

Hab. Mexico, Jalapa (*Deppe* [1]), Orizaba, Cordova (*Sallé*), Playa Vicente (*Höge*); Guatemala (*Sallé*, *Salvin*).

This is apparently a rare species, as we have received only ten specimens. The form with immaculate head and thorax considered by Erichson as a variety should be treated as the typical form of the species, the insect with maculate head and thorax as a variety. *C. transversus* exhibits much variation in the colour of the posterior parts of the under surface, the prosternum and mesosternum being, however, always yellow, but behind this the colour varies from yellow to black. There is a great dissimilarity between the large and small males, the latter differing but little from the females, while the larger examples have the surface quite dull and the sculpture obliterated. *C. transversus* may be distinguished from *C. jucundus*, to which it is closely allied and with which it agrees in the peculiar form of the scutellum, by the rather larger size and more distinct punctuation, by the prosternum being not quite so short, and by the different colour: though each of the species varies greatly in colour, I have not seen any example of the one agreeing with the other in this respect. The elytra of *C. transversus* are either black or black with a green tinge, and the dark colour on the head and thorax when present is more definite than it is in the other species.

22. **Camptodes solitarius,** sp. n. (Tab. X. fig. 24, ♀.)

Rotundatus, convexus, dilute rufus, prothorace medio, pectore abdomineque fuscis, elytris nigris, viridi-tinctis, sat fortiter punctatis.
Long. $4\frac{1}{4}$ millim.

Hab. Guatemala, Dueñas (*Champion*).

Although we have received only one female of this insect there can be no doubt that it belongs to a distinct species. It is allied to *C. transversus*, but the prosternal process is evidently longer and broader than in that species, and the punctuation of the elytra is considerably coarser; these characters also separate it from *C. jucundus*, to the dark

varieties of which it is also extremely similar. The scutellum is almost truncate behind. The structure of the mesosternum and the metasternum in the middle is similar to that of the other species of this group, the former having a carina not broadened at the base, and the latter being depressed and rather finely margined. The females in this group may be mistaken for males owing to the last ventral segment having a depressed margin behind; and in the female of *C. solitarius* the resemblance to a male is increased by there being some elongate pubescence in the middle of this margin.

23. **Camptodes melanopterus,** sp. n.

Rotundatus, convexus, dilute rufus, elytris nigerrimis; antennarum clava lata, nigricante, apice ferrugineo.
Long. 5–5½ millim.
Mas. Supra opacus.
Fem. Supra nitida.

Hab. MEXICO, Acapulco in Guerrero (*Höge*).

This insect differs from *C. transversus* and *C. jucundus* in the form of the scutellum, the latter being of normal shape, instead of having the sides subangulate and the apex obtusely angulate in the middle as it is in the species mentioned; the pygidium is rather more closely and distinctly punctured; the scutellum and the entire surface, except the elytra, are of a clear red colour; the club of the antennæ is considerably broader than it is in the two allied species, darker in colour, and more distinctly emarginate at the extremity; the structure of the prosternum and breast is similar to that of *C. transversus.*

We have received two male and two female specimens of this species. *C. bicolor*, Er., is said to have the club of the antennæ subfuscescent, and I have therefore not identified it with this species, which has the club black with its apex somewhat ferruginous. It would perhaps be better to remove *C. melanopterus* from this group to the following one.

Group 2.

Prosternal process larger than in group 1; *mesosternal carina frequently thickened and flattened at the base; metasternum not depressed in the middle in front, its margin very distinct; lobes of the labrum rounded and simple; margin of the prothorax and elytra without spines.* (Species 24–46.)

This is the most numerous in species of any of the groups, and I can at present only divide it in an artificial and unsatisfactory manner as follows:—

A. Colour testaceous or ferruginous (elytra occasionally with vague black vittæ).
Species 24–31.

B. Elytra black in colour; rest of the body either black (in one or two species only) or rufo-testaceous, or rufo-testaceous with the breast and hind body black.
Species 32–46.

A.

Colour testaceous or ferruginous. (Species 24–31.)

24. **Camptodes communis.**

Camptodes communis, Er. in Germ. Zeitschr. iv. p. 336 [1].

Hab. MEXICO [1], Ventanas in Durango 2000 feet (*Forrer*), Jalapa, Frontera, Tapachula (*Höge*), Atoyac, Teapa (*H. H. Smith*), Cordova, Vera Cruz, Tuxtla (*Sallé*), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, R. Hondo, Belize (*Blancaneaux*); GUATEMALA, Zapote, San Gerónimo, Chacoj, Teleman (*Champion*).

Var. vilis minor, punctatura prothoracis disci minus obsoleta; elytris fuscis; mas et femina similes.

Hab. MEXICO, Teapa (*H. H. Smith*), Tapachula (*Höge*); BRITISH HONDURAS, R. Hondo (*Blancaneaux*); GUATEMALA, La Tinta in Vera Paz (*Champion*).

This species, as understood by me, is a most variable one, and very difficult to define and recognize in all its variations. It has, however, as the first and most important character, the sculpture of the pygidium excessively minute, so that it is only subopaque, and that the larger punctures on it are very fine and distant. Great differences occur in other respects, more particularly in the males; the large examples of this sex are quite dull on the upper surface, and have the sculpture of either the thorax or the elytra, or of both, more or less completely effaced; other specimens of this sex have the sculpture but little different from that of the female, and thus connect the var. *vilis* with the larger forms; this variety, if compared only with the well-marked males of the larger form, would be almost certainly considered a distinct species. Mr. Gaumer sent us a large series of *C. communis*; the larger number of his specimens are of the female sex, but the males sent by him exhibit a great deal of variety. There is also considerable variation in the series procured by Mr. Smith at Teapa. The specimens from Guatemala are few in number, but also vary very much. Reitter has merged two or three of Erichson's South-American species in *C. communis*, but it is very doubtful whether this is correct.

25. **Camptodes externus,** sp. n.

Rotundato-ovalis, nitidus, rufo-testaceus, elytris externe late nigricantibus; prothorace tantum obsolete punctato; elytris parcius punctatis.

Long. 4 millim.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*); GUATEMALA, Cerro Zunil (*Champion*).

This, though very closely allied to *C. communis*, is, I think, probably a distinct species. The black colour extending all over the outer parts of the elytra is not perhaps of much importance, but it is accompanied by a finer punctuation on the thorax and a more scanty one on the elytra. The antennæ are entirely yellow, and the pale yellow pygidium is quite destitute of punctures. The var. *vilis* of *C. communis*, which also has yellow antennæ and is the only form of that species that much resembles

C. externus, has the disc of the thorax much more coarsely punctured. I have seen only one male that I can refer to *C. externus*, and it has the sculpture slightly coarser than it is in the female.

26. Camptodes molestus.

Camptodes molestus, Kirsch, Berl. ent. Zeitschr. 1873, p. 147 [1]; Reitter, Verh. Ver. Brünn, xii. 1, pp. 125, 189 [2].

Hab. Mexico [2].—South America, Peru [1 2].

On comparing Reitter's description and remarks with that of Kirsch it seems probable that Reitter may have had more than one species before him when treating of *C. molestus*, and that his identification of the Mexican and Peruvian examples may prove to be incorrect, in which case this name should be removed from our list of species.

27. Camptodes adustulus.

Camptodes adustulus, Reitter, Verh. z.-b. Ges. Wien, xxvii. p. 170 [1].

Hab. Mexico [1].

This name probably refers to *C. communis*, about which, as is not to be wondered at, Reitter appears to have been rather confused; he distinguishes it (in addition to certain characters of punctuation which are unimportant) by the fine punctuation of the pygidium and by the elytra being dark behind; these characters are both given by Erichson as applying to *C. communis*. The statement as to the absence of a sutural stria is no doubt due to an error of observation. I have not seen any *Camptodes* without a sutural stria, and Reitter's remark (Verh. Ver. Brünn, xii. 1, p. 102) shows that he believed the stria to be absent, when it is, in fact, deep but placed very near the suture.

28. Camptodes discoideus.

Camptodes discoideus, Reitter, Verh. Ver. Brünn, xii. 1, p. 125 [1].

Hab. Mexico [1].

This is perhaps an insect allied to *C. cognatus*, and with blackish vittæ on the elytra, as I have recorded in a variety of *C. cognatus*; but it is impossible to come to a certain conclusion as to it from Reitter's tables.

29. Camptodes cognatus, sp. n. (Tab. X. figg. 25, ♂; 25 *a*, labrum and mandibles.)

Rotundato-ovalis, convexus, ferrugineus, nitidus, prothorace modice fortiter punctato; pygidio crebre fortiterque punctato.

Long. $4\frac{1}{2}$–5 millim.

Var. maris, opacus, punctatura elytrorum et prothoracis plus minusve obsoleta.

Hab. Mexico, Chilpancingo and Cuernavaca (*H. H. Smith*), Acapulco, Matamoors, Jalapa (*Höge*), Cordova (*Sallé*); Guatemala (*Salvin*), Capetillo, Dueñas, Sabo (*Champion*); Panama, Caldera in Chiriqui (*Champion*).

I distinguish from *C. communis* a large number of specimens which have the punctuation of the pygidium coarse; these examples, moreover, are, on the average, considerably larger. The examples of *C. cognatus* show great variation, but, as in the case of *C. communis*, I am unable to find any definite characters to divide them into species. The males are the most variable: in the typical form this sex differs only very slightly from the female in sculpture, and nearly all the males of a considerable series found by Mr. Champion at Capetillo and Dueñas are in this condition; but in other localities there are great variations in the sculpture of the male examples. I am able, however, to satisfactorily distinguish all the individuals by the coarser sculpture of the pygidium.

A good series of examples of *C. cognatus* has been obtained, though apparently it is much less abundant than *C. communis*; if all the specimens I assign to it really belong to one species, it must be quite as variable as *C. communis*. Among the examples are two or three specimens of a variety in which the elytra have each a fuscous vitta, or large patch, broader behind.

30. **Camptodes pyxis,** sp. n.

Rotundato-ovalis, convexus, ferrugineus, antennis pedibusque testaceis; pygidio densissime, fortiter punctato.
Long. 5–5½ millim.

Hab. Mexico, Atoyac in Vera Cruz, Teapa (*H. H. Smith*); British Honduras, R. Hondo (*Blancaneaux*); Guatemala, Cubilguitz, San Joaquin, Chacoj, Paso Antonio (*Champion*); Panama, Bugaba, David (*Champion*).

Antennæ with the club clear yellow, not large. Thorax moderately closely and finely punctured, the punctuation on the disc quite distinct though finer than that of the sides. Elytra sparingly and not coarsely punctured. Pygidium coarsely and very closely punctured. Male with the upper surface dull.

This is a larger insect than *C. cognatus*, and will be readily identified by the unusually coarse and dense sculpture of the pygidium and the clear yellow club of the antennæ. The prosternal process is very broad, and the mesosternal carina has a very broad flat lower face. It appears to be a rare species, occurring in solitary examples, only ten specimens having been obtained.

31. **Camptodes biformis,** sp. n. (Tab. XI. figg. 1, ♂; 1 *a*, ♀, extremity of the elytra.)

Ovalis, sat convexus, ferrugineus, sat crebre punctatus; pygidio nitido, ortiter punctato.
Long. 5½ millim.
Mas capite, prothorace elytrisque opacis, obsolete punctatis, elytrorum apicibus rotundatis.
Fem. nitida, fortius punctata, elytrorum apicibus prolongatis et sinuatis.

Hab. Guatemala, Zapote (*Champion*).

This insect is similar in appearance to the species of group 4 (*C. chiriquensis* &c.).

Independently of the structure of the labrum, it may be known by the shorter prosternal process and by the extreme difference between the sexes. Although we have received only one male and three females, and I have no special evidence that they are the sexes of one species, I do not feel much doubt as to such being the case. The male greatly resembles that sex of *C. cognatus* (the large varieties) and of *C. pyxis*, but differs from both in having the hind tibiæ rather longer and more slender; the thorax, too, is quite dull and without sculpture, while in the male of *C. pyxis* the thorax is shining, and even in the largest varieties of the male of *C. cognatus*, though the head and thorax are dull, their sculpture is not so obsolete as it is in this sex of *C. biformis*. The apices of the elytra leave the pygidium quite exposed in the male, and are, indeed, not longer than in *C. cognatus*. The female has the upper surface entirely shining, the head and thorax distinctly though finely punctate, the elytra elongate, completely covering the pygidium, the apices much prolonged and sinuate at the sides. In both sexes the club of the antennæ is moderately broad, brown though not at all blackened. The mesosternal carina is rather slender, and its lower face is not flattened.

B.

Elytra black. (Species 32–46.)

This section I cannot divide in any way that would really facilitate the determination of the species. In many of them the apices of the elytra are peculiar in form in the female sex; this should be one of the first characters looked at in examining a species, and those in which this is not the case (Nos. 32–40) are here placed first.

32. **Camptodes nigrinus,** sp. n.

♀. Oblongo-ovalis, minus convexus, sat nitidus, niger; antennis testaceis, clava lata, nigra; tarsis rufis; prothorace subtilissime punctato.

Long. 4 millim.

Hab. Guatemala, Zapote (*Champion*).

Head moderately closely and finely punctured, with a deep puncture on either side of the very indistinct clypeal suture. Thorax rather short, extremely finely punctate. Elytra sparingly and finely punctate, somewhat short; apices each separately rounded. Pygidium sparingly and finely punctate, moderately shining. Mesosternal carina slender. One specimen.

This insect, except in colour, comes very close to *C. externus*; it is also extremely similar to the smallest specimens of *C. aberrans* of the preceding section.

33. **Camptodes limbicollis.**

Camptodes limbicollis, Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 113[1].

Hab. Mexico[1], Teapa (*H. H. Smith*); Guatemala, San Juan in Vera Paz (*Champion*).

The colour here is peculiar, and is rather of the type found in *Eucamptodes*, the under surface being yellow, the upper surface black with pallid side margin to the prothorax. Only four specimens have been received.

34. **Camptodes heterocheilus,** sp. n.

Rotundato-ovalis, sat convexus, dilute rufus, elytris nigerrimis ; antennarum clava sat lata, subfuscescente.
Long. 5–5½ millim.

Hab. MEXICO, Pinos Altos in Chihuahua (*Buchan-Hepburn*), Chilpancingo in Guerrero (*H. H. Smith*), Tacambaro in Michoacan (*Höge*), Guanajuato, Juquila (*Sallé*).

Antennæ with the club a little infuscate towards the extremity. Thorax clear red, with numerous punctures, these being more distinct at the sides than on the middle. Scutellum red, distinctly punctate. Elytra deep black, rather sparingly, moderately coarsely punctate ; apex of each moderately rounded. Pygidium moderately closely and finely punctured.

This species, of which I have seen only six examples (of the female sex), presents an extreme resemblance to *C. melanopterus* and to *C. addendus*, but the structural distinctions will not allow it to be united with either ; the prosternum is longer than it is in *C. melanopterus*, and the metasternum not depressed in front ; the club of the antennæ is not so large nor so dark. From *C. addendus* it is distinguished by the rather smaller prosternum and by the carina of the mesosternum being more slender at the base. The labrum has the excision in the middle smaller than in some of the allied species, and with straighter sides, so that in this respect this insect somewhat approximates to the *C. chiriquensis* group. The form of the labrum varies, however, somewhat from species to species in this section of *Camptodes*, and is not different in *C. heterocheilus* from what it is in certain others.

Until more examples have been obtained and the male sex recognized, the species must be looked on as rather doubtful. The example from Pinos Altos is a male, but being unique and no female found with it its determination is very doubtful ; the elytra are only fuscous in colour, and the example may be an exponent of a distinct species allied to *C. communis* and *C. cognatus*. It is interesting as being obtained further to the north than any other individual of the genus. A male from Chilpancingo more probably is really that sex of *C. heterocheilus* ; it is smaller than the female, and has the elytra only fuscous-black, at the sides even testaceous in colour.

35. **Camptodes addendus,** sp. n.

Rotundato-ovalis, subconvexus, dilute rufus, elytris scutelloque nigris ; illis crebre, minus regulariter, versus suturam fortius, punctatis.
Long. 5 millim.

Hab. GUATEMALA, Capetillo, Dueñas (*Champion*).

Very similar to *C. heterocheilus*, but with the scutellum black: separated also by important structural differences, the prosternal process being larger, the basal portion of the mesosternal carina quite broad, the metasternum less produced in the middle in front, not in the least depressed there, and with very thick margin; the excision of the labrum is small, as it is in *C. heterocheilus*. Independent of these structural characters, the species may be usually recognized by the punctuation of the elytra being rather coarser and more irregularly distributed, the punctures being especially large on the basal part of the elytra near the suture. The punctuation of the pygidium is fine and rather scanty. The male is broader and less convex than the female, and has the upper surface duller and its sculpture much effaced.

36. **Camptodes laticornis,** sp. n.

Rotundato-ovalis, sat convexus, rufo-testaceus, elytris nigricantibus ad latera plus minusve vage ferrugineis; pygidio opaco, subtilissime parce punctato.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ with the club large and very broad, slightly infuscate. Head, thorax, and scutellum reddish-yellow, the thorax with the punctuation on the middle fine. Elytra moderately closely punctate.

There is a considerable difference between the two sexes, the female being shining, while the male is dull and has the sculpture obliterated and the elytra not so black as in the female.

This insect is (especially in the male sex) intermediate in colour between those species with yellow and those with black elytra, and comes equally near to *C. addendus* and to *C. communis*. From the former it is distinguished by the red scutellum and the broader club to the antennæ; while from *C. communis* it is separated by the darker elytra, the rather larger club of the antennæ, and by the broader and flatter lower face of the mesosternal carina.

37. **Camptodes sordidus,** sp. n.

Rotundato-ovalis, sat convexus, rufo-testaceus, elytris nigricantibus, irregulariter punctatis; pygidio parce, subtiliter punctato.

Long. 4 millim.

Hab. GUATEMALA, Chacoj (*Champion*).

We have received only two badly preserved female specimens of this obscure *Camptodes*; but they cannot be reconciled with any other of our region, and are to a certain extent important because they appear to be almost equally allied to several species. They perhaps most resemble the small varieties of *C. laticornis*, but the smaller club of the antennæ distinguishes them therefrom. They are also extremely similar to the female of *C. dimorphus*, but the apices of the elytra are different. From

C. communis, var. *vilis*, they differ by the blacker elytra, the more finely punctate disc of the thorax, and the broader mesosternal carina. The apex of each wing-case is a good deal rounded. The punctuation of the breast and ventral segments is more scanty than usual. The legs are slender, as in *C. dimorphus*.

38. **Camptodes bicolor.**

Camptodes bicolor, Er. in Germ. Zeitschr. iv. p. 333 [1].

Hab. Mexico (*Deppe* [1]).

I hesitated long whether this description might not be applicable to *C. melanopterus*; but I think not. It is, however, possible that the brief description was drawn from two species, of which *C. melanopterus* might be one, *C. heterocheilus* or *C. laticornis* the other. The expression "clava subfuscescente" suggests an insect with a yellow club to the antennæ which had been a little discoloured by decay.

39. **Camptodes erythroderus,** sp. n.

Rotundato-ovalis, sat convexus, dilute rufus, capite supra, pectore abdomineque nigricantibus, elytris nigris; antennarum clava sat lata, brunnea.
Long. 4–5 millim.

Hab. Mexico, Playa Vicente, Cordova, Tuxtla, Juquila, Cosamaloapam (*Sallé*), Atoyac in Vera Cruz, Teapa (*H. H. Smith*); British Honduras, R. Hondo (*Blanca-neaux*); Guatemala, Chacoj (*Champion*); Costa Rica, Irazu (*Rogers*).

Head moderately finely punctate, scarcely shining, with a larger puncture on each side near the front. Thorax extremely finely punctate; on the disc the punctures are very distant and so minute that they can scarcely be detected, and even at the sides they are very fine. Scutellum piceous. Elytra quite black, moderately finely punctate, each strongly rounded at the apex. Pygidium black, shining, moderately finely, rather distantly, punctate. In the male the surface of the thorax and elytra is less shining than it is in the female, and in the largest examples of the sex the punctuation of the thorax and elytra is almost entirely obliterated.

This insect much resembles the female sex of *C. laticornis*, but in addition to the colour of the head and of the pygidium, it differs in having the club of the antennæ narrower and the mesosternal carina rather broader at the base. The examples of the species in Sallé's collection were labelled *C. collaris*, Reitter; but that insect I have already recorded as belonging to another group of the genus. The claws of the tarsi of *C. erythroderus* are almost destitute of basal lobe. The species is apparently far from common; the localities outside of Mexico have each yielded only a single example.

40. **Camptodes terminalis,** sp. n.

Rotundato-ovalis, sat convexus, læte rufus, elytris nigris ad apicem rufo-marginatis.
Long. $3\frac{3}{4}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

I have seen no other *Camptodes* of the colour of this species, viz. red, with the elytra black margined with red behind. The club of the antennæ is broad, clear red. Head and thorax distinctly punctate. Elytra sparingly punctate, rather long; the apex of each but little rounded at the suture, similar in the two sexes. Pygidium red, rather closely and coarsely punctate. Mesosternal carina broad.

Seven specimens; in the male the elytra are dull, while in the female they are shining.

41. **Camptodes maurus,** sp. n.

♀. Oblongo-ovalis, minus convexus, nitidus, niger, antennarum funiculo fusco-testaceo; prothorace elytrisque crebrius subtiliusque punctatis; elytrorum apicibus prolongatis et fortiter sinuatis.

Long. 6 millim.

Hab. Guatemala, Zapote (*Champion*).

This species differs from the female of *C. biformis* not only in its black colour, but also in being slightly more elongate in form, and in having the elytra at the apices a little more prolonged and sinuate; I have therefore no doubt the two are distinct, though, except in colour, they are certainly very closely allied. The head has a deep puncture on either side, on the clypeal suture; the thorax is much rounded at the sides near the hind angles. On the under surface the middle of the prosternum and of the back of the head are much more dilute in colour than the other parts, being infuscate-yellow.

One specimen only.

42. **Camptodes iteratus,** sp. n.

Oblongo-ovalis, minus convexus, dilute rufus, elytris nigris.

Long. 5 millim.

Mas supra opacus, obsoletius punctatus, elytrorum apicibus rotundatis.

Fem. nitida, minus obsolete punctata, elytrorum apicibus prolongatis et sinuatis.

Hab. Guatemala, Zapote (*Champion*).

Club of antennæ large, not infuscate. Head with a deep puncture on each side of the clypeal suture. Thorax finely, the elytra moderately finely, the pygidium coarsely, punctate.

Two males and one female.

In colour this insect resembles *C. heterocheilus* and its allies. The elytra of the female are not of such an intense black colour as those of the male.

43. **Camptodes dimorphus,** sp. n.

Rotundato-ovalis, parum convexus, dilute rufus, elytris nigris.

Long. $3\frac{1}{4}$–$3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Club of the antennæ moderately broad. Head and disc of the thorax extremely finely punctate; elytra sparingly punctate, more or less brown at the extremity. Pygidium sparingly and not coarsely punctate.

In this species the sexual differences are considerable: the female has the terminal portion of each elytron rounded and obliquely truncate inwardly behind the termination of the suture; in the male each apex is separately rather strongly rounded. The large males have the thorax and elytra quite dull and their sculpture obliterated.

Eight specimens.

44. **Camptodes furcatus,** sp. n. (Tab. XI. figg. 2, ♂; 2 *a*, ♀, extremity of the elytra.)

Rotundato-ovalis, parum convexus, rufus, scutello, elytris, pectore abdomineque nigris.
Long. $3\frac{1}{4}$–4 millim.
Mas elytris apice singulo rotundato.
Fem. elytris apicibus prolongatis et furcatis.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Antennæ with the club red, only moderately broad. Head finely punctate, red, with the summit of the vertex frequently infuscate. Thorax only very sparingly and finely punctate. Elytra sparingly punctate. Pygidium black, shining, sparingly punctate. In the male the thorax and elytra are either dull, or shining as in the female, and the apex of each elytron is separately rounded; in the female each elytron has the apex produced so as to form a rounded prominent process. In the female sex the last ventral segment has a broad, depressed, shining space extending longitudinally along the middle.

A large series has been received of this species, and, except in the stature and sculpture of the males, it scarcely varies at all; the summit of the vertex is, however, sometimes distinctly, sometimes scarcely at all, black.

45. **Camptodes signaticollis,** sp. n.

Rotundato-ovalis, parum convexus, rufo-testaceus, vertice, prothoracis medio, elytris, pectore abdomineque nigris.
Long. $3\frac{1}{2}$–4 millim.

Hab. Panama, Bugaba, Caldera (*Champion*).

Head and thorax finely punctate, the latter with a broad dark longitudinal mark on the middle, the former with the vertex blackish; club of the antennæ clear red, moderately large. Elytra rather coarsely punctate. In the male the thorax and elytra are more or less dull, and the apices of the elongate elytra are much rounded, the inner part of the curve being somewhat truncate. In the female the surface is shining, and the elytra are dehiscent at the apices, which form each an obtuse angle, the hind margin being very slightly sinuate; the apex of the last ventral segment in this sex is shining in the middle and very feebly raised.

About twenty specimens have been obtained; they do not vary, except in the stature and sculpture of the males.

46. **Camptodes mexicanus,** sp. n.

Ovalis, parum convexus, rufo-testaceus, vertice prothoraceque in medio plus minusve vage infuscatis, scutello, elytris, pectore abdomineque nigris.
Long. 4 millim.

Hab. MEXICO, Juquila (*Sallé*), Soledad in Guerrero 5500 feet (*H. H. Smith*).

We have received only two females of this species; though very closely allied to *C. signaticollis*, it is undoubtedly distinct. The club of the antenna is clear yellow, rather small; the head is distinctly, the thorax sparingly and extremely finely, punctate; the punctures on the elytra are distant and moderately coarse. The apices of the elytra are obtusely prolonged and dehiscent as in the female of *C. signaticollis*; but the last ventral segment has a peculiar plication, forming an elevation at the apex in the middle.

Group 3.

Margin of the prothorax and elytra armed at the lower edge with short, sharp spines; lobes of the labrum simply rounded. (Species 47.)

Although we have only one species of this group in our region, I have a second from Brazil, even more remarkable, in my collection.

47. **Camptodes armatus,** sp. n.

Oblongo-ovalis, sat convexus, ferrugineus, crebre punctatus; antennarum clava nigra, apice vix emarginato; prothorace margine laterali subtus spinis brevissimis, retrorsum spectantibus, armato.
Long. 6 millim.
Mas prothorace elytrisque subopacis.
Fem. supra nitida.

Hab. GUATEMALA, Chacoj, San Isidro (*Champion*).

Head rather coarsely punctured, shining. Thorax and elytra moderately coarsely and closely punctured. Pygidium coarsely punctured. Elytra moderately long, apices each a little rounded, similar in the two sexes.

Of this very distinct species we have received only one pair. It is similar in size, form, and colour to *C. chiriquensis*, though the points of difference are so important as to separate the two very widely. The peculiar spines on the sides of the thorax extend the whole length of the margin, but are very short in front, and cannot be seen from above, but towards the base they are longer, and project so as to be easily detected. The sexual difference in sculpture is very considerable.

Group 4.

Labrum broader, its lobes more truncate in front, forming an angle, with a minute denticle on each side of the median excision. Sides of the prothorax and elytra unarmed. (Species 48–51.)

The species of this group are usually larger insects of less rotund form, and have the prosternal process comparatively more elongate.

48. **Camptodes latipes,** sp. n. (Tab. XI. fig. 3, ♂.)

Rotundatus, minus elongatus, ferrugineus, elytris posterius ex parte majore nigris; pygidio peropaco, impunctato.

Long. $5\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

We have received only one male example of this species; it cannot be mistaken for any other of this group, as the form is that of *C. communis*, the elytra being less elongate than they are in its congeners, but by the structure of the labrum and mandibles the insect certainly belongs here. The surface is completely dull, as in the largest males of *C. communis*; the head is only finely punctured, the thoracic sculpture is completely obliterated, and the punctuation on the elytra can scarcely be detected; the large black marks on the elytra are vague in front, do not reach the base, and are very widely separated at the suture anteriorly, but at the apex they leave only the margin ferruginous. The mesosternal carina is rather narrow.

I suspect that the female of this insect will prove to be very different from the male.

49. **Camptodes chiriquensis,** sp. n. (Tab. XI. figg. 4, ♀; 4 *a*, labrum and mandibles; 4 *b*, extremity of the elytra.)

Rotundato-ovalis, sat convexus, crebre subtiliter punctatus, nitidus, ferrugineus; pygidio crebre, subobsolete punctato.

Long. 5–$5\frac{1}{2}$ millim.

Mas elytris subopacis, apicibus subtruncatis, angulo suturali leviter obtuso; abdomine segmento ultimo ventrali apice modice pubescente.

Fem. elytris nitidis, apicibus subsinuatis, ad suturam breviter dehiscentibus.

Hab. PANAMA, Bugaba, Volcan de Chiriqui, David, Caldera (*Champion*).

Head coarsely punctate; club of the antennæ fuscous, rather large. Thorax rather closely and finely, the elytra sparingly punctate.

We have received eighteen specimens of this species. Except in size, it varies little; the sculpture in the males exhibits but little peculiarity; the sexual distinctions in the form of the apices of the elytra, though not great, appear to be quite constant.

50. **Camptodes diffinis,** sp. n.

Rotundato-ovalis, sat convexus, crebre subtiliter punctatus, nitidus, ferrugineus; pygidio opaco, obsoletissime punctato.

Long. 5–5½ millim.

Mas elytris minus nitidis, apicibus parum rotundatis, angulo suturali obtuso, haud rotundato.

Fem. elytris nitidis, apicibus ut in mare constructis (vix magis recte truncatis) sutura apice haud dehiscente.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This species greatly resembles the large varieties of *C. communis*, from which it may be distinguished—independently of the structure of the labrum—by the head being rather more coarsely punctured, the eyes larger, and the elytra (viewed in profile) slightly longer, and with their apices a little less rounded. The more obtuse sutural angle of the elytra and its similarity in the two sexes distinguish the insect from *C. chiriquensis* and *C. masculinus*; it also has the elytra rather less elongate than they are in the two allied species. Three male and two female examples have been received of *C. diffinis*; one of the former is a very small specimen with the elytra scarcely less shining than they are in the female.

51. **Camptodes masculinus,** sp. n.

Rotundato-ovalis, sat convexus, crebre subtiliter punctatus, nitidus, ferrugineus; pygidio crebre punctato.

Long. 6 millim.

Mas elytris subopacis, apice singulo rotundato.

Fem. elytris nitidis, apicibus nullo modo sinuatis, abdomine segmento ultimo ventrali apice in medio subtuberculatim producto.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

The female of this species will be readily identified by the peculiar small projection in the middle of the apex of the last ventral segment; it differs from the corresponding sex of *C. chiriquensis* not only by this, but also by there being no trace of any sinuation of the apices of the elytra, these parts are, however, slightly more prolonged than they are in the male. The male resembles the corresponding sex of *C. chiriquensis* so closely that the only sure way I see of distinguishing them is the more rounded form of the apex of each elytron in *C. masculinus*. Five examples—two males, three females.

AMPHICROSSUS.

Amphicrossus, Erichson, in Germar's Zeitschr. iv. p. 346 (1843).

This is a genus consisting of but few species—about ten have been described,—yet having a very wide distribution in both hemispheres. In the New World, North America and South America each possess, so far as is at present known, only one or two species. I now add two from our region.

The genus is one of the most distinct and isolated of all the genera of the family, and

it is remarkable that the species are excessively similar to one another, though the male secondary sexual characters afford a satisfactory means of distinguishing them.

1. **Amphicrossus horni,** sp. n. (Tab. XI. fig. 5, ♂.)

Rotundato-ovalis, sat convexus, supra fusco-testaceus, capite nigricante, antennis nigris, basi testaceo, pedibus testaceis; pube depressa flavescente vestitus, corporis limbo longius ciliato.
Long. $3\frac{3}{4}$–5 millim.

Hab. Guatemala, Teleman, Chacoj, San Isidro (*Champion*).

Rather variable in colour, and occasionally presenting the appearance of having one or two pallid testaceous marks at the base of each wing-case; readily distinguished from all our Nitidulidæ by the long and conspicuous fringe with which the sides of the thorax and elytra are ornamented. The male has an erect pencil of setæ on each wing-case not very far from the suture, these pencils being widely separated at their extremities.

Mr. Champion procured a good series of this species at the sap exuding from trees. It is extremely similar to the North-American *A. ciliatus*; but the marginal fringe of the body is considerably longer, the punctuation of the upper surface is finer, and the terminal ventral segment in the male is differently formed. I have much pleasure in naming the species after the well-known American savant, who has been so kind as to forward me a specimen of *A. ciliatus* for comparison.

We figure a small male found by Mr. Champion at Teleman.

2. **Amphicrossus limbatus,** sp. n.

Rotundato-ovalis, sat convexus, piceus, crebre punctatus, parum nitidus, pube depressa flavescente vestitus, corporis limbo breviter ciliato; antennarum basi pedibusque rufis.
Long. 3–5 millim.

Hab. Guatemala, Chiacam, Teleman (*Champion*).

Antennæ with large and dark flat club. Head densely punctate. Thorax finely and more sparingly punctate, the hind angles very broadly rounded, the base not margined. Elytra finely punctate, sparingly pubescent, with series of distant setæ among the pubescence. Male with the two pencils of setæ on the disc of the elytra placed very close to the suture, so that their tips touch one another.

We have received only one pair of this species. Besides being darker in colour and having the ciliæ surrounding the body shorter than in *A. horni*, it has the middle of the prosternum straighter than in the other species, that is to say, the plane of the front part being less bent upwards differs very little in direction from the plane of the prosternal process. The male of *A. limbatus* has the process at the end of the last ventral plate elongate, and widely separated from the rest of the plate, the tubercle preceding it broad and very prominent.

ÆTHINA.

Æthina, Erichson, in Germar's Zeitschr. iv. p. 306 (1843); Reitter, Verh. Ver. Brünn, xii. 1, p. 83.

Originally established for a single representative from Madagascar, this genus now comprises about ten species from very different parts of the world. It has not been found in North America, but as it is more numerous in species in Japan and in Mexico than it is elsewhere, it can scarcely be entirely absent from the southern parts of the United States. The species appear to be only occasionally met with, but when found many individuals may be procured.

All the species of *Æthina* possess a curious structure in the form of a number of fovea-like depressions placed behind the suture at the extreme base of the pygidium; these foveæ in the normal condition are just concealed by the extremities of the wing-cases.

1. **Æthina villosa.**

Æthina villosa, Reitter, Verh. Ver. Brünn, xii. 1, p. 84[1].

Hab. Mexico[1] (*Mus. Vindob.*), Mirador, Durango city, Jalapa (*Höge*), Guanajuato, Puebla (*Sallé*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Capetillo (*Champion*).

This insect is extremely variable in size and in the colour of the surface; the length varies from $4\frac{1}{2}$ to $7\frac{1}{2}$ millim., and the colour from black to dark red; the extent of the dark maculation on the disc of the thorax is also very variable, and may be almost entirely absent, or may extend all across the thorax. In all its variations *A. villosa* may, however, be recognized by there being a band of pale pubescence all across the extreme base of the elytra, the pubescence elsewhere on the wing-cases being concolorous with the surface, black when the elytra are black, red when they are of that tint.

We have received a large series of this species. According to Mr. Champion it is found in rotten oranges and other fruits.

2. **Æthina concolor,** sp. n. (Tab. XI. fig. 6.)

Oblongo-ovalis, convexa, nigra, dense punctata, superne pube depressa pallescente ubique vestita; antennis rufis, clava nigricante.

Long. 5–7 millim.

Hab. British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Capetillo, Sabo (*Champion*).

This species is distinguished from *Æ. villosa* by the uniform pallid pubescence with which the upper surface is clothed. In other respects the two are very similar. We have received a good series of *Æ. concolor*, and it appears to be not quite so variable in colour and size as *Æ. villosa* is.

3. **Æthina quadrata,** sp. n. (Tab. XI. fig. 7, ♂.)

Latior, oblongo-ovalis, nigra, fortiter punctata, pube brevi concolore minus dense vestita; antennis medio rufo. Long. 6 millim.

Hab. GUATEMALA, Las Mercedes, Zapote (*Champion*); PANAMA, Bugaba (*Champion*).

Broader and shorter, but less convex than *Æ. villosa*, more sparingly punctate, and with less conspicuous pubescence; the apices of the elytra subtruncate, each being less rounded at the sutural angle. Thorax strongly transverse, the sides rounded and narrowed in front, nearly straight behind, the base much sinuate on each side. Sutural stria of the elytra scarcely perceptible. Pygidium closely and deeply punctate. Legs short, piceous, the tarsi red.

We have received only four specimens of this insect—two are immature, and are of a dark red colour. We figure the one found at Bugaba, it is a male. *Æ. quadrata* bears a considerable resemblance to a large black *Carpophilus*, such as *C. rufitarsis*.

POCADIUS.

Pocadius, Erichson, in Germar's Zeitschr. iv. p. 318 (1843).

This genus includes about eight species, which are distributed in Europe, Japan, North and South America, and Cuba. The European species, though very similar to those from North America in appearance, presents a well-marked distinction in the structure of the breast.

1. **Pocadius helvolus.** (Tab. XI. fig. 8.)

Pocadius helvolus, Er. in Germ. Zeitschr. iv. p. 320[1]; Horn, Trans. Am. Ent. Soc. vii. p. 310[2].

Hab. NORTH AMERICA[1 2].—MEXICO, Durango city (*Flohr*), Guanajuato (*Sallé*).

The specimens from our region agree with one from Montana in my own collection.

2. **Pocadius ——?**

Hab. MEXICO, Cordova (*Sallé*).

A single individual, in bad preservation, almost certainly belonging to an undescribed species.

3. **Pocadius fulvipennis.**

Pocadius fulvipennis, Er. in Germ. Zeitschr. iv. p. 319[1].

Hab. MEXICO (*Ehrenberg* [1]).

We have not received anything agreeing with this description.

HEBASCUS.

Hebascus, Erichson, in Germar's Zeitschr. iv. p. 311 (1843).

This is a genus comprehending at present only about half a dozen species confined to Central and South America. Although placed in a different subfamily to the European and North-American genus *Cychramus*, yet it comes very close thereto; but I think the two may be kept distinct, as *Hebascus* has a serial arrangement of the pubescence and the mesosternum in front more strongly carinate. *H. aurantiacus*, one of our species, makes a nearer approach to *Cychramus* than some of the other representatives. Indeed, owing to the distinctions in the form of the prosternal process, our *Hebasci* are divisible into sections which are almost, if not quite, as distinct from one another as *Hebascus* is from *Cychramus*.

Hebascus, especially in the second section, appears at first sight to belong to the series of genera of Strongylinæ in which the prosternal process is open behind; but it really belongs to the *Pocadius* group of genera in which there is a posterior perpendicular face to the process; this face is, however, only short, and in the second section is concealed by the horizontal (lower) surface being prolonged backwards beyond it.

§ 1. *Lower face of the prosternal process but little produced beyond the vertical face.*

This section comes very near to *Cychramus*.

1. **Hebascus mexicanus,** sp. n.

Circularis, convexus, testaceus, antennarum clava nigra; elytris quasi costatis, setulis seriatis numerosis, declinatis, interstitiis parce pubescentibus.
Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ with the club broad, short, and black. Thorax rather coarsely punctured, strongly setose, the base almost straight. Elytra with very regular series of closely-placed setæ, which are short, curvate, and much directed backwards, so that they almost give rise to the appearance of very fine costæ; there is no trace of striation, but between the series of setæ are two rows of shallow, not large punctures, each bearing a very short hair. Prosternal process quite short; middle of the breast smooth and shining.

Four specimens.

2. **Hebascus bugabensis,** sp. n. (Tab. XI. fig. 9.)

Circularis, convexus, testaceus, antennarum clava nigra; elytris quasi costàtis, setulis seriatis numerosis, declinatis, interstitiis parce pubescentibus.
Long. 3 millim.

Hab. Panama, Bugaba (*Champion*).

Extremely close to *H. mexicanus*, but considerably smaller, and having the punctuation, especially on the apical half of the elytra, coarser, and the base of the thorax a little sinuate on each side. In other respects similar to *H. mexicanus*. Six specimens.

3. **Hebascus aurantiacus,** sp. n. (Tab. XI. fig. 10.)

Rotundatus, convexus, setis suberectis densius vestitus, aurantiacus, antennarum clava nigra.
Long. 5 millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

Antennæ with rather short, intensely black, club. Head small, the eyes very prominent. Thorax greatly narrowed in front, slightly sinuate at the base on each side, moderately coarsely and not closely punctate. Elytra rather closely covered with suberect pubescence, among which there is a seriate pubescence which is not very conspicuous owing to its differing but little in length and direction from the diffuse setosity. Legs elongate. Prosternal process quite short. Only one example has been found of this very distinct species.

§ 2. *Lower face of the prosternal process more elongate, definitely margined, and with the apex rounded.*

4. **Hebascus discoideus.**

Hebascus discoideus, Reitter, Verh. Ver. Brünn, xii. 1, p. 97[1].

Hab. MEXICO [1], Jalapa (*Höge*), Cordova (*Sallé*).

5. **Hebascus traili,** sp. n.

Rotundatus, convexus, fusco-niger, antennis pedibusque testaceis, illarum clava fusca; elytris setulis brevibus distantibus, declinatis, seriatim dispositis, interstitiis obsolete punctatis.
Long. 2 millim.

Hab. PANAMA, Bugaba, Caldera (*Champion*).—AMAZONS, Garrao, Rio Jurua (*Trail*).

Antennæ with short broad club. Thorax finely punctate, pubescent, the base not at all sinuate, the margins testaceous. Elytra with series of rather short distant setæ, which are strongly declinate, the interstices indistinctly biseriately punctate, pubescent. Legs short; terminal joint of the tarsi long. Prosternal process large.

Mr. Champion procured a large series of this little *Hebascus*, exhibiting no variations. The examples given to me by Prof. Trail, after whom I have named the species, were found in fungus.

6. **Hebascus erinaceus,** sp. n. (Tab. XI. fig. 11.)

Rotundatus, convexus, ferrugineus, nitidus, antennarum clava nigra; elytris setis erectis, concoloribus, seriatim dispositis armatis, interstitiis parce pubescentibus.
Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, Caldera (*Champion*).

Antennæ with rather short, broad, very black club. Thorax short, shining, hirsute, sparingly punctate, the base not at all sinuate. Elytra with long, erect hairs, placed at a considerable distance from one another in very regular series, the interstices rather obscurely biseriately punctate and pubescent. Legs short. Prosternal process elongate.

TEICHOSTETHUS, gen. nov.

Metasternum anterius acute marginatum, in medio ultra marginem abrupte reflexum. Mesosternum carinatum. Prosternum processu sat elongato.

Mandibles with slender extremity, their tips truncate, the truncation emarginate. Antennæ with very elongate, compressed, loosely articulated, three-jointed club. Maxillary palpi short; labial palpi scarcely thicker than the maxillary. Prosternal process rather large, acutely margined, with rounded extremity. Mesosternum acutely carinate, the carina not rising to the level of the metasternum. Metasternum with a strongly raised margin extending completely across it in front; this margin forms a gentle curve in the middle, but it does not, however, here mark the junction with the mesosternum, this taking place at the level of the mesosternum, so that the piece in front of the metasternal margin is nevertheless a prolongation of the metasternum. Legs short and stout, the tarsi strongly dilated.

This genus is confounded in collections with *Hebascus*, and I think also with *Strongylus*; from the former it is well distinguished by the curious margin of the metasternum, from the latter by the prolonged prosternal process. From *Hebascus* it may, too, be distinguished, without looking at the under surface, by the base of the thorax being distorted on each side in order to allow of its coadaptation with the humeral callus. The form of the metasternum suggests that it may be allied to *Camptodes*; but this is not the case, as *Teichostethus* belongs to the series with the prosternal process bent upwards as in *Strongylus*; only that, as in the second section of *Hebascus*, the inflection of the apex is masked by the separate development and perfection of the horizontal part of the process.

1. **Teichostethus vinosus,** sp. n. (Tab. XI. fig. 12.)

Rotundato-ovalis, convexus, rufus, antennarum clava nigra, prothorace elytrisque ex parte majore nigris, marginibus rufis; pube brevi, erecta hispidus.

Long. 4 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*).

Antennæ with the club quite as long as the other joints together. Thorax coarsely punctate, the punctures not round but transverse; the base deeply sinuate on each side. Scutellum coarsely punctate. Elytra with a scanty suberect pubescence, among which are some setæ serially arranged—these setæ, not being very different from the other pubescence, are not very conspicuous,—and with series of large and closely placed,

but very shallow, punctures; each interstice with a series of finer punctures along the middle.

The four examples we have received of this species are not in very good condition; the coloration of the upper surface is not very sharply defined and is probably variable.

2. **Teichostethus guatemalenus,** sp. n. (Tab. XI. fig. 13.)

Ovalis, convexus, rufo-ferrugineus, antennarum clava nigra; hispidus pube erecta; prothorace crebre fortiter punctato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Isidro, Zapote, San Gerónimo (*Champion*).

This insect is very closely allied to *T. vinosus*, but I have little doubt is distinct; it is rather smaller and narrower, and without black markings; the antennæ are less elongate; and the punctuation and setosity of the upper surface are closer. The peculiar punctures of the thorax, owing to being more closely placed, are seen to have a curved arrangement in front of the scutellum.

STRONGYLUS.

Strongylus, Herbst, Natursyst. Käfer, iv. p. 188 (1793).
Cyllodes, Erichson, in Germar's Zeitschr. iv. p. 342.

Strongylus at present contains about twelve species; but it is very widely distributed in both hemispheres, and will probably become an extensive genus. Species belonging to it are already known from both North and South America.

1. **Strongylus unicolor,** sp. n. (Tab. XI. fig. 14.)

Rotundato-ovalis, convexus, nitidus, nigerrimus, antennarum basi tarsisque rufis.
Long. $4\frac{1}{2}$ millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Juquila (*Sallé*).

Antennæ with elongate club, the first joint of which is rather longer than broad, the terminal joint ferruginous at the extremity. Head closely and moderately coarsely punctured. Thorax with the punctuation very distinct, but finer and less close than that on the head. Scutellum almost impunctate. Elytra with fine and irregular, almost duplicate, series of punctures, and with a very fine and scanty interstitial punctuation.

2. **Strongylus lateralis,** sp. n. (Tab. XI. figg. 15, 16.)

Ovalis, convexus, nigerrimus, nitidus, antennarum basi, prothoracis lateribus tarsisque rufis.
Long. $4\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil, Capetillo (*Champion*).

This insect is rather smaller than *S. unicolor*, and has the sides of the thorax very

evidently pallid, and besides this differs also in sculpture. The thorax is more finely and sparingly punctate, so that there is a greater contrast between the punctuation on it and that on the head. The elytra have their series of punctures irregular but not duplicate, and only a very distant interstitial punctuation.

Mr. Champion procured a small series of this species; the specimens exhibit very little variation.

3. **Strongylus chiriquensis,** sp. n.

Rotundato-ovalis, convexus, nitidissimus, rufo-piceus, antennarum clava nigra; elytris obsolete seriatim punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*); Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

This species is distinguished from *S. lateralis* by the uniform, more dilute colour, and by the more obsolete sculpture of the elytra. In other respects the two appear to be excessively similar. One example only from each locality.

4. **Strongylus camptoides.**

Strongylus camptoides, Reitter, Verh. Ver. Brünn, xii. 1, p. 128[1].

Hab. Mexico (*Mus. Vindob.*[1]), Cordova (*Sallé*).

Very close indeed to *S. lateralis* and *S. unicolor*; but the pygidium is red, and the under surface dark red or piceous. I have seen only two specimens.

5. **Strongylus mollis,** sp. n.

Rotundato-ovalis, convexus, nitidus, piceo-testaceus, supra piceus, prothoracis lateribus, antennis pedibusque testaceis, antennarum clava fusca.

Long. $4\frac{1}{4}$ millim.

Hab. Mexico, Jalapa (*M. Trujillo*).

Though different in colour from *S. lateralis* this insect is very closely allied thereto, and may possibly be an immature colour-variety of that species; but I think it more likely to prove distinct, the shape being broader and the prosternum more obsoletely carinate: in punctuation the two are very similar. Three specimens. One of the examples appears to be mature; and in it the colour of the lower surface is flavescent, with the middle of the body piceous.

6. **Strongylus æqualis,** sp. n.

Rotundatus, valde convexus, subtus dilute piceus, supra nigerrimus, antennarum basi rufa.

Long. 3 millim.

Hab. Mexico, Cordova (*Sallé*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Antennæ with large, broad club, the basal joint of which is not so long as it is broad. Head rather coarsely, the thorax finely and sparingly punctured. Elytra with regular series of fine punctures, interstitial punctuation almost absent.

This is a true *Strongylus*, though it has the prosternal process small and narrow; in size and outline *S. æqualis* more resembles the species of the next genus. Only one specimen is extant from each locality.

7. **Strongylus mimetes,** sp. n. (Tab. XI. fig. 17.)

Rotundatus, valde convexus, nitidissimus, rufo-ferrugineus, concolor.
Long. 3 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

There can be no difficulty in distinguishing this insect from *S. æqualis* owing to the difference in colour; in other respects the two are very much alike, though there is no doubt *S. mimetes* is a distinct species, as it differs from its congeners in not having the prosternum carinate. At first sight it more resembles *Mecyllodes seriatus*, from which it differs, apart from its structural characters, in having the club of the antennæ pallid and the serial punctuation of the elytra very fine. The elytra have almost no interstitial punctuation, and the punctuation of the thorax is fine and distant. The prosternum is flatter in this species than it is in the allies, and only very obscurely carinate along the middle.

MECYLLODES, gen. nov.

Corpus rotundatum, convexum, absque pubescentia. Labrum sat magnum, integrum. Mandibulæ breves, sub labro conditæ. Palpi labiales breves, sat crassi. Pedes omni parum distantes, crassi; tarsis fortiter dilatatis.

The members of this genus are extremely similar to *Strongylus* (=*Cyllodes*, Er.) in appearance, but have the middle and hind legs only slightly separated. The prosternum is constructed as in *Strongylus*; the metasternum is not so much produced in front in the middle; the mesosternum is feebly carinate, and differs also from that of *Strongylus* inasmuch as it descends in the middle to the level of the metasternum, and forms, in fact, a very fine margin in front of it; in *Strongylus* the descending part of the middle of the mesosternum is furcate at the extremity, and only the points of the fork reach the level of the metasternum, where they appear as two very minute pieces placed one on each side of the angle of the metasternum, close to the coxa. The antennary grooves are formed as in *Strongylus*, and so also are the parts of the mouth, as far as I can see them.

In addition to the two here described, I have a third species in my collection which I have no doubt is a Brazilian insect.

1. **Mecyllodes clavicornis,** sp. n. (Tab. XI. fig. 18.)

Rotundatus, convexus, nitidus, ferrugineus, antennarum clava nigra; elytris seriatim sat fortiter punctatis, interstitiis impunctatis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*).

Antennæ with large black club, the first joint of which is strongly transverse and but little longer than the second. Head rather closely and moderately coarsely punctured. Punctuation of the thorax near the sides similar to that of the head, on the middle more scanty and finer. Elytra with regular series of rather large punctures, the interstices almost impunctate. Under surface coarsely and very closely punctate, with a polished space in the middle of the metasternum; prosternum carinate along the middle. Eight specimens.

2. **Mecyllodes nigropictus,** sp. n.

Rotundato-ovalis, convexus, nitidus, rufus, prothorace disco utrinque elytroque singulo nigro-plagiatis; elytris interstitiis obsolete minus parce punctatis.

Long. $3\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*), Cerro de Plumas (*Höge*); GUATEMALA, San Gerónimo, Cahabon, Senahu (*Champion*).

In this species the club of the antennæ is rufescent; there is a rounded dark mark on each side of the thorax, and a large longitudinal black mark occupying the larger part of each wing-case; the punctuation of the middle of the breast is scanty, but not altogether absent, and that of the interstices of the elytra is distinct though very fine; the punctures in each series on the elytra are much more numerous than they are in *M. clavicornis*.

MEONCERUS, gen. nov.

Corpus minus convexum, subelongatum, glabrum. Clava antennarum magna, laxe articulata. Labrum integrum. Prosternum processu sat elongato, apice acuminato. Mesosternum obsolete carinatum. Metasternum in medio haud marginato, inter coxas intermedias subcontiguas reflexo-productum. Tarsi inæquales, anteriores dilatati, intermedii et posteriores subdilatati.

This is apparently very distinct from any other genus; it perhaps comes nearer to *Cychramus* than to any other, though as the upper surface is quite destitute of pubescence the two have a very different appearance. The labrum is rather large, and is not divided in the middle. The mandibles are short, concealed by the labrum when closed, and minutely denticulate before the apex. The palpi are simple, the terminal joint of the labial pair being but little incrassate. The prosternum has a rather long process between the coxæ, and the lower face of the process is placed at a right angle to the apex, which is applied to the vertical face formed by the meso- and metasterna between the middle coxæ. These latter are but little separated, the meta-

sternum being bent upwards in a curve between them. The hind coxæ are moderately distant.

1. **Meoncerus salvini,** sp. n. (Tab. XI. fig. 19.)

Suboblongus, parum convexus, piceo-ferrugineus, nitidus, antennarum clava nigra; elytris seriatim punctatis, interstitiis fere impunctatis.
Long. 8 millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Head rather closely and coarsely punctured. Thorax smooth and shining, much narrowed in front, strongly margined at the sides, very broad, the base not lobed in the middle but feebly bisinuate, subobsoletely and not closely punctate. Scutellum rather large, impunctate. Elytra elongate, with regular series of punctures, and with a sutural stria which is deep behind and there very close to the suture, but diverges somewhat anteriorly and is continued to the scutellum as a series of punctures. Legs slender. Prosternal process a little depressed before the extremity, strongly acuminate.

Seven specimens. The colour varies from ferruginous to piceous-black. I cannot detect any sexual distinctions.

2. **Meoncerus seriatus,** sp. n.

Oblongo-ovalis, subconvexus, piceus, nitidus, antennis basi pedibusque sordide rufis, illarum clava nigra; prothorace obsolete punctato; elytris seriatim fortiter punctatis, interstitiis impunctatis.
Long. 5–6 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This insect is, on the upper surface, very similar to *M. salvini*, though it is a good deal smaller, and has the thorax more obsoletely punctured, and the serial punctures on the elytra larger. On the under surface the prosternal process is narrower, more parallel, and but little pointed behind and not impressed before the apex, while the front of the metasternum is but little prominent and not emarginate for the reception of the prosternal process.

Five specimens. I am unable to find any external sexual distinctions. Like *M. salvini*, the species varies in depth of colour. I have the male before me, and it has a very large supplementary segment, which, however, is quite internal in the normal state.

SOMATOXUS, gen. nov.

Corpus elongatum, subdepressum. Elytris acuminatis. Tarsi omnes lineares, anteriores haud vel vix dilatati.

The peculiar form and the slender tarsi of the insects for which I establish this genus give them an appearance foreign to the Nitidulidæ; but in all other respects they are, so far as I can see, quite of ordinary Nitidulid character.

The labrum is transverse, with a small excision in the middle in front. The mandibles are concealed under the labrum; they have an elongate, very slender, and acute termination. The palpi are short and slender, not dilated. The antennary grooves are convergent. The prosternum is compressed along the middle, and terminates in a rather elongate process. The mesosternum is placed above the level of the metasternum and is feebly carinate; the middle coxæ are not greatly separated, and the metasternum is prolonged between them and curved upwards to be received into the small furcate process in which the mesosternum terminates. The hind coxæ are rather widely separated. The tibiæ are slender. The tarsi are elongate and very slender, their terminal joint long, the fourth joint quite visible, but very small; the third and second joints are each elongate; the basal joint is as long as the second, third, and fourth together.

These characters bring the genus near to *Meoncerus*, from which *Somatoxus* is distinguished by the elongate acuminate elytra and the filiform feet. It belongs to the series with the prosternal process closed behind, although the posterior face, or part, is excessively short.

1. **Somatoxus sallæi,** sp. n. (Tab. XI. fig. 20, ♂.)

Elongatus, subdepressus, nitidus, testaceus, antennarum clava fusca, prothorace medio fuscescente; elytris seriatim fortiter punctatis.

Long. 5½ millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ slender, with abrupt, rather short, three-jointed club, which is black, with the extremity yellowish. Head moderately closely and distinctly punctured. Thorax not greatly narrowed in front, sparingly punctate, only slightly emarginate in front; base feebly sinuate, not lobed in the middle; the surface very shining, not in the least pubescent. Scutellum extremely short, but broad. Elytra elongate, sinuate at the sides behind, with the apices acuminate; with regular series of coarse punctures becoming obsolete behind; interstitial punctuation almost absent.

In addition to the single immature example from Sallé's collection I have seen only one specimen, that has for many years been in my own collection without locality; I supposed it to be from the West Indies or Mexico. We figure Sallé's example, which is no doubt a male, as it has the front tarsi very feebly dilated and some very minute denticles at the sides of the elytra behind; in my own example the front tarsi are quite simple, and there are no denticles at the sides of the wing-cases.

2. **Somatoxus hydroporoides,** sp. n. (Tab. XI. fig. 21.)

Sat elongatus, subdepressus, nitidus, nigricans, antennis pedibusque fuscis, illarum clava nigra; elytris seriatim fortiter punctatis.

Long. 3–4 millim.

Hab. Mexico, Cordova, Toxpam (*Sallé*); Panama, Volcan de Chiriqui (*Champion*).

Antennæ yellow, with abrupt black club. Head and thorax moderately closely and coarsely punctate, very shining, black, the side-margins of the latter picescent, the base produced in the middle. Elytra with series of large punctures, which are finer behind; the sides behind oblique, feebly sinuate; the sutural angle acute.

We have received four examples of this species. Two of them I suppose to be males, as there is a minute barely perceptible denticulation of the lateral margins of the wing-cases behind; but the front tarsi are not at all dilated.

CYCLOCACCUS, gen. nov.

Corpus breviter ovale, sat convexum, glabrum. Clava antennarum laxa. Labrum transversum, breve, integrum. Mandibulæ breves, sub labro omnino conditæ. Prosternum processu sat magno, apice rotundato. Mesosternum obsolete carinatum. Metasternum medio haud impresso, subtiliter marginatum, margine inter coxas utrinque producto. Coxæ intermediæ et posteriores distantes. Tarsi æquales, omnes sublineares, paullulum dilatati.

Cyclocaccus differs from *Meoncerus* in the short form, the less dilated tarsi, and the more widely separated middle coxæ. In form it perhaps more resembles *Pallodes*, from which it differs by numerous characters, and notably by the more widely separated coxæ. The antennary grooves are strongly convergent, and the short broad labrum has a small depression on the middle. The palpi are simple and quite short.

1. **Cyclocaccus monticola,** sp. n.

Subovalis, sat convexus, nitidus, piceus, supra nigro-piceus, antennarum basi, prothoracis lateribus pedibusque testaceis; antennarum clava nigra; prothorace lævigato; elytris seriatim punctatis, interstitiis impunctatis.

Long. 4 millim.

Hab. GUATEMALA, Quiche Mountains 7000 to 9000 feet (*Champion*).

Head obsoletely punctate, deeply transversely impressed near the front. Thorax smooth and shining, black in the middle, broadly yellow at the sides, strongly transverse, much narrowed towards the front, a little curved at the sides; base nearly straight, rather narrower than the base of the elytra. Scutellum very broad, sinuate at the sides, very obtuse behind. Elytra with regular series of closely-placed punctures; interstices impunctate, the punctures of the series obsolete at the apex. Pygidium and under surface smooth and shining. Legs slender, rather long. In the male the anterior and middle tarsi are broader than they are in the female.

Eight specimens.

2. **Cyclocaccus brevicollis,** sp. n.

Brevis, sat convexus, nitidus, testaceus, supra piceus, limbo dilutiore; antennarum clava nigra; prothorace fere impunctato; elytris seriatim punctatis, interstitiis obsolete punctatis.

Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

The punctures of the series on the elytra are in this species moderately close, but little impressed; the interstices are not in the least convex, and have an extremely fine punctuation. The scutellum is rather elongate, as well as broad.

Only one specimen was found of this remarkably broad little Nitidulid.

3. **Cyclocaccus læticulus,** sp. n.

Brevis, sat convexus, flavus; capite, antennarum clava, prothoracis medio elytrisque nigerrimis; his subtiliter seriatim punctatis.

Long. vix 3 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Head quite impunctate, deeply transversely impressed. Thorax very short, impunctate, broadly yellow on each side, and with a black patch, of about the same width as the yellow lateral part, along the middle. Scutellum large, impunctate, scarcely sinuate at the sides, rounded behind. Elytra with regular series of distant punctures, each puncture only slightly impressed, but rather large; the interstices not in the least convex, and without sculpture. Pygidium and under surface bright yellow.

Only one specimen has been received.

OXYCNEMUS.

Oxycnemus, Erichson, in Germar's Zeitschr. iv. p. 351 (1843).

This genus consists of four or five species, and is confined to Tropical America. *Psilopyga,* Leconte, has been referred to it as a synonym, but this is incorrect.

The genus is one of the very few genera of Nitidulidæ that possess a spinose production of the outer angle of each tibia.

1. **Oxycnemus rostrosus.** (Tab. XI. fig. 22, ♂.)

Oxycnemus rostrosus, Reitter, Verh. Ver. Brünn, xii. 1, p. 137[1].

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, San Juan and San Gerónimo in Vera Paz, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

The specimens I refer to this species are fourteen in number, and if all really belong to one species it is a variable one in size and punctuation. As the form of the male mandibles is the same in all the individuals of that sex, I treat them as of one species, though they exhibit a good deal of variation in size and punctuation. If there be more than one species amongst these specimens it will no doubt prove a difficult matter to distinguish them by any conspicuous characters common to the two sexes. In the males there appear to be some slight differences as to the extent of the dilatation of the intermediate feet.

The locality for Reitter's type of the species is not known [1]. Our figure is taken from a male found at San Gerónimo.

2. **Oxycnemus fulvus.**

Oxycnemus fulvus, Er. in Germar's Zeitschr. iv. p. 352 [1].

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).—South America, Brazil [1] (*coll. Sharp*).

Our specimens of this species are only three in number, and are distinguished from *O. rostrosus* solely by the mandibles of the male being simple; these three examples are only equal in size to the smallest specimens of *O. rostrosus*, but Brazilian examples are equal in size to the largest exponents of *O. rostrosus*. The male may be distinguished from the female by the existence of a long pencil of fine hairs on the middle of the front edge of the prosternum.

PYCNOCNEMUS, gen. nov.

Corpus breve, haud pubescens. Labrum breve, bilobum. Tarsi anteriores et intermedii dilatati, posteriores simplices. Coxæ intermediæ et posteriores minus late distantes.

I establish this genus for an insect, of which we have only received one example, having so completely the appearance of *Oxycnemus* that I at first referred it to that genus; it differs therefrom, however, by important characters. The labrum is quite small, and the mandibles have not the peculiar formation that is seen in either the male or the female of *Oxycnemus*, the terminal portion being slender, and the inner edge possessing one small tooth some distance before the extremity. The head beneath is formed as in *Oxycnemus*, the deep antennary grooves being subparallel and at their termination curved outwards behind the large ocular lobe. The palpi are simple and short. The pro-, meso-, and meta-sterna seem to be formed quite as in *Oxycnemus*. The front and middle legs have their tibiæ thick and their tarsi rather strongly dilated; the hind legs are more slender, and their tarsi are simple; the outer apices of the tibiæ are destitute of the long tooth or spine that exists in *Oxycnemus*.

1. **Pycnocnemus anisotomoides,** sp. n. (Tab. XI. fig. 23.)

Brevis, convexus, ferrugineus, subnitidus; elytris subtiliter seriatim punctatis; tibiis intermediis et posterioribus ad apicem externe haud dentato-productis.

Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ with dark fuscous club, the two joints preceding this transverse. Head rather closely and finely punctured. Thorax very short, its punctuation scarcely different from that of the head, but a little more fine and less close. Scutellum finely and distantly punctate. Elytra rather dull, with fine series of punctures and a very feeble interstitial punctuation. One specimen, probably a male.

PSILOPYGA.

Psiloypga, Leconte, Proc. Ac. Phil. 1853, p. 286 ; Horn, Trans. Am. Ent. Soc. vii. p. 318.
Eugoniopus, Reitter, Wien. ent. Zeit. iii. p. 264, & iv. p. 76.

Psilopyga has been recently abandoned by the North-American entomologists (Lec. & Horn, Classification of the Col. of N. Amer. 2nd ed. p. 151) as being synonymous with *Oxycnemus*. The two genera are, however, very distinct, and I do not think they should be placed in the same division of the Strongylinæ. In *Psilopyga* the mesosternum is brought down to the level of the metasternum, and the prosternal process is free and passes over the carinate mesosternum, and is received upon the front of the metasternum. This is a very different structure to that found in *Oxycnemus*, and differs but little from what exists in *Camptodes*. *Psilopyga* thus belongs to the group of genera in which the prosternal process is quite open behind ; while *Oxycnemus* is the most advanced exponent of the group in which it is closed behind.

On the other hand I do not notice any difference between the Japanese genus *Eugoniopus* and *Psilopyga*, and have no hesitation in uniting them. *Psilopyga* is thus a genus having at present one species in Japan, two in North America, and one in Mexico.

1. **Psilopyga fasciata**, sp. n.

Ovalis, sat convexa, nigra ; elytris ex parte majore rufo-testaceis ; antennis testaceis, clava fusca ; pedibus piceis, tarsis dilutioribus.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico (*Truqui, in Mus. Brit.*).

Head strongly constricted in front of the eyes, closely and rather coarsely punctured, piceous. Thorax black, punctured above evenly, like the head. Scutellum triangular, almost rectilinear at the sides, distinctly punctured. Elytra with the basal portion reddish-yellow, the apical part black, the black part not so extensive as the yellow part ; with regular, very distinct and definite series of punctures, and with a somewhat sparing and fine, but quite distinct, interstitial punctuation. Pygidium large, black, coarsely punctate.

This species is known to me only by a single example in our National Collection. It is a male and has a large supplementary segment exposed at the apex of the pygidium. Its resemblance to a Histerid is very striking. In addition to the colour, it differs from the North-American *P. histrina* by the much narrower prosternal process.

PALLODES.

Pallodes, Erichson, in Germar's Zeitschr. iv. p. 348 (1843).

This genus has hitherto consisted of about six species of small Nitidulidæ, but has apparently a wide distribution, representatives supposed to belong to it being recorded from North and South America, Japan, and Madagascar.

The species of *Pallodes* in our region are evidently numerous, but most of them appear to be extremely rare, and I have not been able to repeat my examination of some of them in such a way as to bring to light all the minor structural characters. They are, however, more easily distinguished by the superficial points of colour and sculpture than is usual in the Nitidulidæ.

§ 1. *Middle tibiæ broad or moderately broad; hind coxæ widely or moderately widely separated.*

This group includes the large majority of our species. In some of those placed near the end of this section the prosternum is compressed between the coxæ and carinate; in others the hind coxæ are more approximate than they are in the species I have placed at the commencement of the group.

1. **Pallodes reversus,** sp. n. (Tab. XI. fig. 24, ♀.)

Brevis, subrotundatus, flavus, supra nigerrimus, antennarum basi flava, prothorace marginibus picescentibus; nitidus; prothorace minus obsolete punctato; elytris subtilius seriatim punctatis, interstitiis parce obsoletissime punctatis.

Long. $3\frac{3}{4}$ millim.

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*).

Head moderately closely and distinctly punctate, shining. Thorax very short and broad, shining, very distinctly punctate. Scutellum large, more finely punctate than the head and thorax, still quite distinctly so. Elytra with very fine distant series of punctures, and with a very slight and distant interstitial punctuation. Pygidium black, shining, moderately closely and not finely punctate. Under surface yellow, shining, impunctate.

This species is of unusually broad and circular form, and resembles the European species of *Liodes* in the family Silphidæ. There is very little difference in the sculpture of the surface in the sexes, the male having the elytra only just perceptibly duller than the female. The male has an excessively large supplementary segment, which in the normal state is quite internal, only its hind margin being seen between the edge of the pygidium and that of the last ventral segment. The two sexes can be easily enough distinguished, however, by the form of the pygidium, which is much broader and more truncate at the extremity in the male than it is in the female.

Herr Höge procured about a dozen examples of this species. Our figure represents a female found by him.

2. **Pallodes mexicanus,** sp. n.

Ovalis, sat convexus, ferrugineus, supra piceus, prothorace rufo-piceo, antennis pedibusque testaceis, illarum clava nigra; prothorace obsolete punctato; scutello lævigato; elytris subtiliter seriatim punctatis, interstitiis vix perspicue punctatis.

Long. 4–$4\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Höge*), Juquila (*Sallé*).

This is not so rotund an insect as *P. reversus*, and has the colour of the upper surface more dilute, the pygidium being pallid ferruginous; the large scutellum has no trace at all of punctuation; and it is not easy to detect any traces of interstitial punctuation on the wing-cases. The middle femora are broad, and are much punctate on the lower face. The under surface is quite impunctate, except on the last ventral segment.

Four specimens.

3. **Pallodes micans**, sp. n.

Ovalis, testaceo-ferrugineus, elytris leviter opalescentibus, antennarum clava nigra; prothorace obsolete punctato; elytris subtilius seriatim punctatis, interstitiis parce subtilissime punctatis.
Long. 4 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Capetillo (*Champion*).

♀. Very shining. Antennæ with elongate black club; all the joints preceding this yellow. Head rather finely, the thorax still more finely and sparingly, punctate, the latter extremely shining. Scutellum extremely finely and sparingly punctured. Elytra with distant series of punctures, which are very slightly impressed though not very small and with a scanty and fine interstitial punctuation. Middle tibiæ rather slender.

This species is allied to *P. silaceus*, Er., but is rather broader and has the serial punctuation on the elytra much less distinct, and the middle tibiæ a good deal more slender. Three specimens.

4. **Pallodes strongyliformis**, sp. n. (Tab. XI. fig. 25, ♂.)

Ovalis, convexus, nitidus, ferrugineo-testaceus, antennarum clava nigra; prothorace obsoletissime punctato, pernitido; elytris subtilius seriatim punctatis, interstitiis fere impunctatis.
Long. 4 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

We have received only a single example of this species, but it is of the male sex. The insect much resembles *P. silaceus*, but differs from that species and its allies by the metasternal border being much more sinuate and produced between the middle coxæ, as well as by having a feeble punctuation of the breast and ventral segments. The middle tibiæ are about as broad as they are in *P. silaceus*, and the punctuation of the thorax is even more obsolete than it is in the North-American insect. In our unique example there are four indistinct blackish marks placed transversely on the middle of the thorax, but I am not sure whether this may not be the result of decay.

I look on this species as a very interesting one, as it appears to me to indicate clearly that the affinities of *Pallodes* are with *Teichostethus* and *Mecyllodes*.

5. **Pallodes signaticollis,** sp. n.

Latus, sat convexus, flavus, elytris, scutello, prothoracis maculis anteriore et posteriore antennarumque clava nigris.
Long. $3\frac{1}{2}$–4 millim.

Hab. Mexico (*Sallé*).

Antennæ short, the joints preceding the club pallid yellow, the club itself black. Head and thorax sparingly punctate, yellow, shining, the latter with a transverse mark on the front margin and a wider one behind black. Scutellum black, distinctly punctate. Elytra with distant series of fine punctures, and with a well-marked interstitial punctuation. Pygidium bright yellow. Under surface yellow, impunctate.

We have received three examples of this very distinct species; one of them is a male, and has the apex of the pygidium more truncate, and the elytra slightly more opalescent and less polished than the female.

6. **Pallodes sellatus,** sp. n.

Latus, sat convexus, flavus; antennarum clava, prothoracis maculis anteriore et posteriore scutelloque nigris; elytris late nigro-cinctis.
Long. 3–4 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*).

Antennæ short, clear yellow up to the fuscous club, the two joints preceding the club large. Head and thorax almost impunctate. Scutellum black, obsoletely punctate. Elytra with a feeble and rather distant punctuation, among which the serial punctuation can scarcely be perceived.

Closely allied to *P. signaticollis*, but, independently of the peculiar coloration of the wing-cases, it may be distinguished by the fact that the serial punctuation of the elytra is very indistinct. The sexual distinctions are the same as they are in *P. signaticollis*.

Two specimens.

7. **Pallodes deletus,** sp. n.

Ovalis, convexus, piceus; capite nigricante; prothorace in medio irregulariter late fuscescente, marginibus testaceis; antennarum basi pedibusque testaceis; obsoletissime punctatus.
Long. 4 millim.

Hab. Mexico, Juquila (*Sallé*); Guatemala, Cerro Zunil (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

Head finely and sparingly punctate, black. Thorax and scutellum almost impunctate. Elytra with the punctuation quite obsolete, the serial punctuation being only just perceptible, and the interstitial punctuation also very fine.

Rather closely allied to *P. silaceus*, from which it is, however, distinguished by the obsolete punctuation and the darker colour. There is a great difference between the sexes, the male being quite dull on the upper surface, as if tarnished, while the female

is shining; both sexes have a well-marked opalescent shimmer on the elytra, and the sutural stria is deep and distinct. The colour, no doubt, varies a good deal, but the extensive infuscation of the middle of the thorax is always present in our examples.

8. **Pallodes regularis,** sp. n.

Oblongo-ovalis, convexus, sordide testaceus, antennarum clava nigricante; elytris evidentius seriatim punctatis, interstitiis parce obsoleteque punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*); Guatemala, San Gerónimo (*Champion*).

Antennæ with broad club, which is of blackish colour. Head rather closely and finely punctate. Thorax and scutellum almost impunctate. Elytra with series of quite definite and distinct punctures, and with a fine and distant interstitial punctuation. Pygidium closely punctate.

Three female examples have been obtained of this species; the distinct serial punctuation of the elytra distinguishes it from *P. micans* and *P. deletus*. It differs from *P. silaceus* by the dark club of the antennæ, and also is of rather more oblong form, with the interstitial punctuation of the elytra less obsolete.

9. **Pallodes cercyonoides,** sp. n.

Ovalis, convexus, piceus, elytris nigris, antennis pedibusque rufis, illarum clava nigra; prothorace crebrius subtiliter punctato; elytris subtiliter seriatim punctatis, interstitiis fere impunctatis.
Long. $3\frac{1}{2}$–4 millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Antennæ with broad, rather short, black club, the apical joint of which is shorter and more rounded than usual. Head and thorax closely and finely punctate. Scutellum almost impunctate. Elytra with regular series of fine punctures, with scarcely any interstitial punctuation. Under surface piceous-red.

This insect resembles *P. mexicanus*, but is of darker colour beneath; has the thorax more closely punctate and the club of the antennæ shorter. Four specimens have been obtained. The male differs very little from the female.

10. **Pallodes smithi,** sp. n. (Tab. XII. fig. 1.)

Rotundato-ovalis, sat convexus, testaceo-albidus, elytris fusco-signatis, antennarum clava nigricante, tarsis fuscescentibus; elytris parce, irregulariter, sat fortiter punctatis.
Long. $2\frac{3}{4}$ millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Club of the antennæ large, black. Head fuscescent-yellow. Thorax pale yellow, vaguely fuscescent on the middle, rather coarsely but not closely punctured. Elytra pale yellow,

with a large dark mark behind, and a smaller spot at each side; rather coarsely punctate. Legs slender, the tarsi fuscescent.

A single male example is all I have seen of this curious insect; it looks like a species of *Anacæna*, a genus of Hydrophilidæ. I have much pleasure in naming it after its zealous and indefatigable discoverer.

11. **Pallodes punctatus,** sp. n.

Ovalis, sat convexus, testaceus, elytris utrinque vage fusco-guttatis, antennarum clava nigricante; irregulariter, fortiter punctatus.

Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Xucumanatlan in Guerrero 7000 feet (*H. H. Smith*).

This is another aberrant Nitidulid which, like *P. smithi*, has the appearance of a species of *Anacæna*. Only one specimen has been found; it is distinguished by the punctuation, which is less fine than usual, and is not serial in its arrangement. The antennæ are short, with broad, black, club. The head and thorax are more deeply and definitely punctate than they are in any other species of the genus, and the punctures are more than usually close and distinct on the disc of the thorax; scutellum only finely and sparingly, the elytra coarsely, punctate.

12. **Pallodes vividus,** sp. n.

Rotundatus, convexus, rufo-testaceus, supra niger, opalescente-micante; scutello elytrisque disco post scutellum rufescentibus; antennis testaceis, clava nigra.

Long. $3\frac{1}{8}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

A peculiar species, of which only one specimen has been procured; it is a female and is very shining. The club of the antenna is moderately long, black, ferruginous towards the extremity. Head sparingly and finely punctate. Thorax very shining, almost impunctate, black, the sides narrowly piceous. Scutellum dark red, almost impunctate. Elytra black, rufescent behind the scutellum; with remote series of distant punctures and a faint interstitial punctuation. Pygidium blackish.

This curious species might at first sight pass for a Phalacrid; the front coxæ are but little separated, but the prosternum is not carinate; the labial palpi are much dilated.

13. **Pallodes abdominalis,** sp. n.

Oblongo-ovalis, convexus, niger, nitidus, subtus piceus, pedibus abdomineque rufis, antennarum basi sordide rufo; elytris seriatim, remote punctatis.

Long. vix 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Club of the antennæ elongate, black. Head finely and sparingly punctured. Punctua-

tion of the thorax, scutellum, and interstices of elytra scarcely perceptible, the punctures of the series on the elytra fine and distant.

This is known to me only by one female specimen; the structure brings it nearer to *P. vividus* than to any other species, but it is well distinguished by the colour and the narrow form. The hind coxæ are more approximate than in the typical forms of the genus, but are not so close as they are in the species of the next section; the front coxæ are but little separated, but the prosternum is not truly carinate.

14. **Pallodes pictus,** sp. n. (Tab. XII. fig. 2.)

Rotundato-ovalis, convexus, piceus; antennarum basi pedibusque testaceis; capite prothoraceque fusco-testaceis; elytris basin versus testaceis et piceo-variegatis.

Long. 3 millim.

Hab. GUATEMALA, near the city, Capetillo (*Champion*).

Antennæ with broad, short, dark club. Head finely and sparingly, but distinctly, punctate. Thorax and scutellum obsoletely punctate, fuscescent, the former broadly sordid testaceous at the base and sides. Elytra piceous or blackish, with a broad irregular space close to the base yellow, and with a black spot or two, or an interrupted dark band, across the middle of the yellow part; with regular distinct series of punctures, but almost entirely destitute of interstitial punctuation; the sutural stria is very fine and placed near the suture. Under surface piceous. Prosternum carinate in front.

We have received eight examples of this species: the sexual differences are very slight.

15. **Pallodes guttatus,** sp. n. (Tab. XII. fig. 3.)

Rotundatus, convexus, nitidus, piceus, antennarum basi pedibusque testaceis, elytris piceo-testaceis, testaceo-guttatis; corpore fere lævigato, capite solo conspicue punctato.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ with broad, short, black club. Head with rather coarse, moderately close punctuation. Thorax sparingly but distinctly punctured at the sides, almost impunctate on the middle; picescent, with the sides dilute. Scutellum very sparingly and obsoletely punctate. Elytra smooth and shining, with faint traces of a distant serial punctuation, piceous, paler towards the extremity, and near the base with two rows of yellowish marks. Prosternum strongly carinate.

Only one specimen has been obtained of this distinct little insect. I think it is a female.

16. **Pallodes jucundus.**

Pallodes jucundus, Reitter, Verh. Ver. Brünn, xii. 1, p. 135[1].

Hab. MEXICO (*mus. Vindob.*[1]).

§ 2. *Middle tibiæ very slender; hind coxæ only slightly separated.*

17. **Pallodes filipes,** sp. n.

Breviter ovalis, sat convexus, piceus, antennarum basi pedibusque testaceis, supra opalescente-micante; elytris seriatim, obsolete remoteque punctatis.
Long. vix 3 millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ with dark club, which is ferruginous at the extremity. Head finely and sparingly punctured. Thorax very short, fuscescent in the middle, more dilute at the sides; sparingly and obsoletely punctate. Elytra with a few series of distant, subobsolete punctures, which quite disappear before the extremity. Two specimens.

18. **Pallodes obscurus,** sp. n. (Tab. XII. fig. 4.)

Breviter ovalis, sat convexus, piceo-testaceus, antennis pedibusque testaceis, illarum clava fusca; elytris seriatim punctatis.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui, David (*Champion*).

Club of the antennæ elongate, fuscescent, not black. Head rather sparingly but distinctly punctured. Thorax very short, sparingly and obsoletely punctured, testaceous, more obscure on the middle. Scutellum rather coarsely punctate. Elytra with distinct regular series of punctures, and with a remote interstitial punctuation. Two specimens.

EUSPHÆRIUS, gen. nov.

Corpus fere globosum, contractile. Prosternum ante coxas fere nullum. Coxæ anteriores subcontiguæ, posteriores late distantes. Tarsi lineares, breves, quinque-articulati, articulo quarto parvo.

Head inflexed; antennary grooves very deep and definite, convergent. Pronotum very large; prosternum excessively small, the only part visible being the small compressed portion between the front coxæ. Mesosternum vertical, but with a very short anterior horizontal part, which is carinate along the middle. Middle coxæ widely separated, the metasternum produced between them, truncate, not turned upwards, the mesosternum descending to its level and forming an extremely fine margin in front of it, this margin with a minute interruption in the middle. Hind coxæ very widely separated. Tibiæ broad. Tarsi small, not at all dilated; first joint of the posterior pair equal in length to the third, the second joint rather long, the fourth small but quite distinct, the fifth about as long as the second, third, and fourth joints together.

The increased capacity of enfolding the head and the extreme reduction in size of the pieces of the prosternum indicate that this genus should be placed at the end of the Strongylinæ, in immediate proximity to the Cybocephalinæ.

1. **Eusphærius godmani,** sp. n. (Tab. XII. fig. 5.)

Subglobosus, nigerrimus, nitidus, antennis articulis intermediis pedibusque piceis; elytris seriatim remote punctatis; scutello obsolete punctato.
Long. capite extenso $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ short, with large three-jointed club, the basal joint piceous, the following joints rufescent, the club quite black. Head rather closely punctate. Thorax and scutellum somewhat sparingly and finely punctate, the latter large. Elytra with regular series of remote, lightly impressed punctures, without interstitial punctuation; sutural stria only visible on the deflexed apical portion. The sutural margins of the posterior four ventral plates duplicate. Legs piceous.

Mr. Champion secured a fair series of this species; on first examination it would be supposed to be allied to *Liodes*, of the family Silphidæ.

2. **Eusphærius scutellatus,** sp. n.

Subglobosus, nigerrimus, nitidus, antennis articulis intermediis pedibusque piceis; elytris seriatim remote punctatis; scutello fortiter punctato.
Long. capite extenso $2\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa, Cerro de Plumas (*Höge*); Guatemala, Zapote (*Champion*).

I see nothing conspicuous to distinguish this insect from *E. godmani*, except the very evident coarse punctuation of the scutellum; this difference is so marked in the series of each that I think *E. scutellatus* is not a mere variety of *E. godmani*.

3. **Eusphærius rubicundus,** sp. n.

Hemisphæricus, rufus, nitidus; antennis clava nigra, basi pedibusque testaceis; elytris seriatim fortiter punctatis.
Long. capite extenso 3 millim.

Hab. Mexico, Cordova (*Sallé*); Panama, Volcan de Chiriqui (*Champion*).

Only two examples of this species have been received; it appears to be closely allied to *E. godmani*, though so different in colour. The antennæ are yellow from the base as far as the club, the latter being very large. The head and thorax are finely punctate. The large scutellum is coarsely and sparingly punctate. The punctures of the series on the elytra are large.

Subfam. *CYBOCEPHALINÆ.*

Although great diversity of opinion has prevailed as to whether *Cybocephalus* should be placed in the Nitidulidæ, I think there can be very little doubt that such a position is correct; the discovery of another genus or two between it and *Eusphærius* is all that is required to place the matter beyond question.

PYCNOCEPHALUS, gen. nov.

Corpus contractile. Caput latissimum. Tarsi quadri-articulati, compresso-dilatati. Antennæ parvæ, articulo basali magno, auriculato, secundo subnodoso; clava tri-articulata, parum lata. Pedes lati, posteriores femoribus tibiisque laminato-dilatatis.

This genus seems to be well distinguished from *Cybocephalus* by the dilated, laminiform femora and tibiæ of the posterior two pairs of legs. It differs also in other characters: the head is excessively broad and short, the eyes widely separated, the first joint of the antennæ of peculiar shape. The metasternum in the middle is acuminate and produced so that the perpendicular part of the mesosternum forms a cavity, the anterior part of the mesosternum being broadly longitudinally impressed. The middle femur is greatly dilated (fig. 6 *a*, middle leg), and in contraction the tibia and tarsus are withdrawn entirely behind it, and appear to be absent; the mesosternum and the anterior part of the metasternum are impressed for the reception of the middle legs, and the metasternum and the first ventral segment for the accommodation of the posterior legs. The tarsi, though dilated, are very strongly compressed.

1. **Pycnocephalus metallicus,** sp. n. (Tab. XII. figg. 6; 6 *a*, middle leg.)

Globosus, niger, supra metallicus, nitidus, tibiis, tarsis antennisque testaceis, harum articulo basali nigro; corpore supra fere lævigato, elytris absque stria suturali.

Long. corpore subcontracto 2 millim.

Hab. Guatemala, San Gerónimo, Tamahu (*Champion*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Head excessively broad. Antennæ small, the basal joint large, auriculate, black, the other joints yellow, the club small. Thorax very convex, very short at the sides but elongate along the middle, smooth, and very shining, the punctuation being excessively minute. Scutellum extremely broad and short. Elytra short, extremely convex, similar in sculpture to the thorax.

Subfam. *IPSINÆ.*

This division is very sharply defined, and differs strongly from all the other Nitidulidæ in the structure of the head; the epicranium is prolonged much in front of the insertion of the antennæ, while the clypeus is reduced to a very small piece quite at the front of the head; the labrum, as described by Erichson and others, being covered by the clypeus.

All the species of this group possess a stridulating-organ on the summit of the vertex. I have observed nothing of this kind in any other Nitidulidæ.

CRYPTARCHA.

Cryptarcha, Shuckard, Elements of Brit. Ent. p. 165 (1839); Erichson, in Germar's Zeitschr. iv. p. 355.

This is one of the most widely distributed of the genera of Nitidulidæ, occurring not only in the continental regions of both the Eastern and Western hemispheres, but also in Australia and New Zealand. About forty species have been described.

The editors of this work have procured examples of a considerable series of species —about twenty-four,—but most of them appear to be very rare insects. They are very difficult to determine from descriptions, though they vary little, and are very easily recognized on comparison of specimens. In some species the male has the right mandible more or less elongate; but in the case of one or two of our species I am not able to decide satisfactorily whether a difference in the condition of the mandibles is a specific character or only a mark of the sexes. The genus is also a very difficult one to divide into sections, for though numerous minor characters exist that may be easily enough observed, yet they gradually disappear when a number of species are examined. The two I use are selected simply because they most easily divide the material I am dealing with.

§ 1. *Pygidium truncate or truncate-emarginate at the extremity.*

The species of this group are oblong insects, transversely convex. They are all apparently very rare.

1. **Cryptarcha longidens,** sp. n. (Tab. XII. fig. 7.)

Oblonga, ferruginea, dense punctata, pubescens, antennarum clava nigra; mandibulis elongatis, inæqualibus, dextra longiore; pygidio apice truncato-emarginato.

Long. 7 millim.

Hab. Mexico, Jalapa (*Höge*).

The form of the mandibles and of the extremity of the pygidium are sufficient diagnostics of this species. The mandibles are not emarginate at the extremity, but are dentate on their upper edge some distance before the apex; the right mandible is much longer and more abruptly curved than the left. The club of the antennæ and the two or three joints preceding it are black. The whole of the upper surface is closely punctate and pubescent; on each wing-case there are eight or nine lines of hairs which are difficult to distinguish among the other pubescence, from which they differ very little. The head is large. The thorax is unusually elongate, strongly sinuate at the base. The hind margin of the pygidium is truncate and feebly emarginate, and there are some short ciliæ at each angle.

Although we have received only three examples I think they represent both sexes,

as in one the internal segment bears long hairs which project at the extremity of the body.

2. **Cryptarcha guatemalena,** sp. n.

Oblongo-ovalis, convexa, ferruginea, dense punctata, pubescens, antennarum clava nigra; pygidio apice depresso et emarginato.

Long. $6\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*), Coban (*Conradt*).

This species is very similar to *C. longidens*, but has the mandibles simple, short, and emarginate at the extremity. The lines of pubescence on the elytra are scarcely distinguishable. The pygidium is very densely punctate, deeply depressed, or indented, towards the extremity, the hind margin emarginate, and each angle ciliate.

Only one example has been obtained from each locality; I can see no difference at all between the two. I should have been glad to treat this as the female sex of *C. longidens*; but as that species has been procured only in Mexico, and I think possibly in both sexes, and this only in Guatemala, I am obliged to treat *C. guatemalena* as distinct.

3. **Cryptarcha sanguinea,** sp. n.

Suboblonga, parum convexa, rufa, capite prothoraceque fusco-rufis; elytris nigris, post scutellum vage rufo-signatis; antennis testaceis, clava nigra; crebre punctata et pubescens, punctura et pubescentia in elytra seriatis.

Long. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Club of the antennæ rather small. Head narrow, somewhat coarsely punctate. Thorax rather short, fuscous, rufescent about the margins, somewhat coarsely punctate, with a greyish pubescence, somewhat shining; base distinctly bisinuate. Elytra rather long, with numerous equal lines of punctuation and griseous pubescence. Pygidium red, much exposed, very densely punctate, depressed in the middle towards the extremity, which is truncate. Under surface clear red.

We have received only one specimen of this species, and I am unable to open the mandibles, but have little doubt that they are short and equal.

4. **Cryptarcha nigra,** sp. n. (Tab. XII. fig. 8.)

Oblonga, convexa, nigra, antennis tarsisque rufis, pubescens, sat fortiter punctata; elytris seriatim, interstitiis fere seriatim, punctatis.

Long. 4–$4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Club of the antennæ rather large, the terminal joint large. Mandibles stout, in the male a little longer than in the female, and unequal, the right one being longer and more curved. Head rather large, moderately coarsely punctured, the sides concavely

arcuate. Thorax elongate, moderately coarsely and closely punctate, the base bisinuate. Elytra not shining, with fine series of punctures and with a subseriate interstitial punctuation; the pubescence equal, that of the series being not more raised than that of the interstices. Pygidium truncate behind, in the female deeply impressed in the middle posteriorly.

Three specimens.

5. **Cryptarcha furcata,** sp. n.

Suboblonga, sat convexa, punctata, pubescens, ferruginea, antennis pedibusque testaceis, illarum clava nigra; elytris seriatim punctatis, interstitiis punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ with rather large club; mandibles rather short, similar, toothed above just before the extremity. Head rather small, sparingly but deeply punctate, with a single gentle concave curve on each side. Thorax somewhat long, moderately closely and coarsely punctate, not quite dull, strongly pubescent. Elytra rather long, with the serial punctuation quite distinct, and with a very distinct interstitial punctuation; the pubescence is subseriate in its arrangement, and some more distinct series of pubescence can be just distinguished. Pygidium much exposed, quite truncate at the apex, but with some setæ at each angle, thus giving it the appearance of being emarginate.

Two examples; these were placed amongst the duplicates of *C. plena*, to which the species bears a great superficial resemblance, although quite distinct by the structure of the pygidium.

6. **Cryptarcha pygidialis.**

Cryptarcha pygidialis, Reitter, Verh. Ver. Brünn, xiii. Abhandl. p. 117 [1].

Hab. MEXICO [1].

This species I have no doubt is very near to *C. longidens* and *C. guatemalena,* but the details of which Reitter's description is made do not agree satisfactorily with our species. The Austrian savant states that the angles of the pygidium are "utrinque in dentem producto": this probably refers to the ciliæ at each angle which give rise in the species of this group to an appearance of that sort.

§ 2. *Pygidium rounded or subacuminate at the extremity.*

A. *Club of the antennæ elongate and laxly articulated, the terminal joint narrower than the tenth.*

The club of the antennæ in these species is dark in colour, the tip of the terminal joint being usually paler.

7. **Cryptarcha inæqualis,** sp. n. (Tab. XII. fig. 9.)

Breviter suboblonga, posterius angustata, pubescens, fusco-ferruginea, antennis pedibusque testaceis, illarum clava nigricante; elytris crebre punctatis, singulo pubescentiæ perparum elevatis seriebus quinque.
Long. 5½–6 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

Antennæ with the ninth and tenth joints large, transverse, the terminal joint much smaller. Head very large, coarsely punctate, the epistome sinuate on each side; mandibles very unequal, the right one elongate and abruptly bent, simple at the extremity, incrassate near the base. Thorax large, very convex transversely, strongly lobed in front, and with the base sinuate on each side; punctuation and pubescence like those of the head. Elytra moderately closely punctate, pubescent, the pubescence subseriate in its arrangement, and with five quite fine and regular lines of pubescence which are indistinct owing to being very slightly elevated. Pygidium densely punctate, but little exposed, rounded at the extremity.

We have received four specimens of this species. I do not see any evident external sexual characters, but the colour varies from dark fuscescent to pale ferruginous.

8. **Cryptarcha brevidens,** sp. n. (Tab. XII. fig. 10.)

Breviter suboblonga, posterius angustata, pubescens, fusco-ferruginea, antennis pedibusque testaceis, illarum clava nigricante; elytris crebre punctatis, seriebus pubescentibus ægre discernendis.
Long. 5½–6 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Head large, the epistome not sinuate on each side, deeply, rather coarsely punctate; mandibles quite short, similar, emarginate at the apex. Punctuation of the thorax rather more distant and finer than that of the head. Elytra rather elongate, moderately closely punctate and pubescent, the lines of pubescence difficult to distinguish. Pygidium nearly covered by the elytra, densely punctate, rounded at the apex.

Two specimens. A third example, from Dueñas, is smaller, and may possibly belong to a closely allied species.

Very similar to *C. inæqualis*, from which it chiefly differs by the mandibular structure, and by the shape of the sides of the head. The lines of pubescence on the elytra are less distinct than in *C. inæqualis*, but this is not important. Notwithstanding the differences between the two insects I should not be surprised if they prove to be the sexes of one species. Although found in different localities this is not of much importance, as the numbers procured are so small.

9. **Cryptarcha gentilis,** sp. n.

Breviter ovalis, posterius attenuata, fusca, antennis pedibusque testaceis, illarum clava nigricante; pubescens, crebre punctata; elytris seriebus punctorum pubescentiæque discretis.
Long. 4 millim.

Hab. GUATEMALA, San Isidro (*Champion*).

Mandibles very short, similar, each deeply notched at the apex. Head moderately closely and deeply punctate, the sides subsinuate. Thorax rather short, moderately coarsely, not closely punctate, almost straight at the base in the middle. Elytra somewhat coarsely punctate, and with distinct series of fine punctures, each series bearing a fine line of pubescence, which is only very slightly elevated; their apices just perceptibly sinuate.

Two specimens.

This insect is rather larger and broader than the European *C. strigata*, and has the thorax less truncate at the base in the middle.

10. **Cryptarcha subtilis**, sp. n. (Tab. XII. fig. 11.)

Breviter ovalis, convexa, pubescens, crebrius subtiliusque punctata, fusca, sat nitida; elytris pubescentia seriata conspicua; antennis pedibusque rufis, illarum clava nigra.

Long. 3–3¾ millim.

Hab. GUATEMALA, Chiacam (*Champion*).

Mandibles short, similar, each notched at the tip. Head rather closely and finely punctate, the sides but little sinuate. Thorax closely and finely punctate, the base straight, except close to the hind angle, where there is a short sinuosity. Elytra with five lines of fine pubescence, the fourth from the suture arcuate, and between it and the fifth near the base there is interposed an additional, shorter and more obscure line of pubescence; surface very finely punctate and very delicately pubescent. Pygidium almost entirely covered by the elytra. Prosternal process very broad, emarginate behind.

Mr. Champion secured a series of about twelve examples of this distinct *Cryptarcha*. I do not detect any sexual differences, and very little variation except in size.

11. **Cryptarcha gibbula**, sp. n.

Breviter ovalis, convexa, nigra, subnitida, opalescenti-nitens, minus pubescens, punctulata; pedibus piceis, tarsis dilutioribus; antennis testaceis, clava nigra.

Long. 5 millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Zapote (*Champion*).

Mandibles short, similar. Head coarsely punctate, the sides sinuate. Thorax large, rather sparingly, but not finely, punctate, the base feebly sinuate. Elytra moderately coarsely punctate, but only feebly pubescent; amongst the general punctuation there may be distinguished five series of punctures, these being not pubescent and differing only from the other punctures by their perfectly serial arrangement. Pygidium almost entirely covered.

This species may be recognized by the black colour, and by the pubescence of the upper surface diminished to an unusual extent. Three examples have been received, and I do not notice any sexual distinctions.

12. **Cryptarcha morata,** sp. n.

Oblonga, parum convexa, supra nigra, prothorace margines versus elytrisque circa scutellum rufis, antennis pedibusque testaceis, illarum clava nigra; subtus fusca, prosterno capiteque rufescentibus; pubescens, nitida, parcius subtiliusque punctata.

Long. $5\frac{1}{2}$ millim.

Hab. Guatemala, Dueñas (*Champion*).

Antennæ moderately long; club elongate, laxly articulated, the terminal joint somewhat small, ferruginous externally. Head rather small, moderately coarsely punctate, the sides simply convexly curved. Thorax short, shining, sparingly and finely punctate, with a scanty but moderately long pubescence. Scutellum narrow, extremely finely punctate. Elytra with fine and distant, subseriate punctuation and with scanty but rather long griseous pubescence. Pygidium red, rounded at the extremity, very little exposed.

This is not closely allied to any other species, so I have described it, although we have received only one specimen, and the mandibles are broken. I think it belongs to the series in which the mandibles are equal and moderately long.

13. **Cryptarcha regularis,** sp. n. (Tab. XII. fig. 12.)

Oblonga, angusta, sat convexa, rufa, capite, prothorace, elytris antennarumque clava nigris, prothoracis elytrorumque basibus rufescentibus; elytris regulariter seriatim punctatis et pubescentibus, interstitiis nitidis, impunctatis.

Long. 4–$4\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Head sparingly punctate, the sides concavely arcuate; mandibles moderately long, a little unequal. Thorax elongate, sparingly punctate. Elytra with quite regular series of fine punctures and pubescence. Pygidium large, closely punctate, very gently rounded at the extremity. Under surface red; head fuscous-red.

This is not at all close to any other species here described. Four specimens have been received; I am uncertain as to their sex, but it is possible that they are all males. The regular series of fine punctures and pubescence, without sculpture or pubescence on the shining interstices, distinguish it from all the allied forms; the series are about eight in number on each wing-case, and external to them there are some more confused series or irregularly arranged punctures.

A single example from Panima in Guatemala (*Champion*) is considerably smaller, and I think may belong to a closely allied species.

14. **Cryptarcha plena,** sp. n. (Tab. XII. fig. 13.)

Brevior, fusco-ferruginea, dense punctata, pubescens, fere opaca, antennarum clava fusca; elytris subtiliter seriatim punctatis, interstitiis subseriatim punctatis.

Long. $2\frac{3}{4}$–$3\frac{3}{4}$ millim.

Hab. Mexico, Cordova, Mirador, Jalapa (*Höge*); British Honduras, R. Hondo

(*Blancaneaux*); Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Caldera, Volcan de Chiriqui (*Champion*).

Head and thorax coarsely punctate, the latter broad, strongly bisinuate at the base, almost lobed in the middle, so that very little of the scutellum is visible. Elytra pubescent, and with fine serial pubescence not strongly different from the other pubescence; the punctures of the series are very closely placed, so as almost to form perfect striæ; there is one, rather irregular, series of punctures on each interstice. The pygidium is largely exposed; it is extremely densely punctate, and is rounded at the extremity.

This appears to be the least rare of our species of the genus, we having received altogether about two dozen examples.

B. *Club of the antennæ compact and broad, the terminal joint as broad as the tenth; its colour black, fuscous, or quite pallid.*

* *Club of the antennæ black or fuscous.*

15. **Cryptarcha cephalotes,** sp. n.

Oblonga, sat convexa, ferruginea, antennarum clava fusca; elytris opacis, seriatim punctatis, subtilius pubescentibus.

Long. 4 millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Only a single example has been received of this species, but the following characters will permit of its certain recognition: the elytra are remarkably dull, but smooth as if greasy; the pubescence is very short; the punctures in each series are remote from one another, and the interstitial punctuation is also serial, and in fact similar to the other, so that the elytra thus have numerous series of distant punctures. The mandibles are unequal, the right one being the longer, and they are dentate above before the extremity. The head is large, more acuminate in front than usual, the sides nearly straight. The pygidium is elongate, with the extremity rounded though narrow, a little reflexed.

16. **Cryptarcha puncticeps,** sp. n. (Tab. XII. fig. 14.)

Oblonga, sat convexa, ferruginea, antennarum clava fusca; capite pubescens, fortiter punctato; prothorace nitido; elytris subopacis, seriatim subobsolete punctatis, fere epubescentibus.

Long. $4\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This is another easily recognized species of which only one specimen has been obtained; it is allied to *C. cephalotes*, but the punctuation and pubescence of the elytra are more obsolete; the difference between the sculpture of the head and that of the

other parts of the upper surface is very striking. The mandibles are very unequal, the right one being greatly prolonged and bent. The head is large, acuminate in front, the sides very slightly sinuate. The thorax is large, shining, the punctuation on the disc very distant and fine, coarser towards the sides. The elytra have a greasy appearance, and the interstitial punctuation is—though seriate—distinct from the serial punctuation, being finer and more remote. The pygidium is elongate, subacuminate.

17. **Cryptarcha clavigera,** sp. n.

Breviter ovalis, sat convexa, ferruginea, supra nigro-submaculata, crebrius subtiliter punctata et pubescens; antennarum clava magna, fusca.

Long. $3\frac{1}{3}$ millim.

Hab. Mexico, Teapa in Tabasco (*H. H. Smith*); Panama, Caldera in Chiriqui (*Champion*).

This insect agrees with *C. discedens* in the unusual size of the club of the antenna, as well as in the colour thereof, which is not black, but unicolorous fuscous; *C. clavigera* is, however, a short, broader insect than *C. discedens*, has considerably finer punctuation, and the upper surface is marked with black, though not very definitely or conspicuously. The punctuation of the head is fine and not close, that of the thorax fine and close; the punctuation of the elytra is very fine, and in fact is concealed by the numerous series of fine hairs. The pygidium is broad and largely exposed. The thorax has four, the elytra several, black marks, but these are indefinite and may not be constant.

One specimen from each locality.

18. **Cryptarcha discedens,** sp. n. (Tab. XII. fig. 15.)

Oblongo-ovalis, sat convexa, pubescens, sat fortiter punctata, subopaca, ferruginea; antennis clava magna, articulo ultimo majore; elytris crebrius subseriatim punctatis.

Long. 4 millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Mandibles short, similar, toothed a little before the extremity. Antennæ with the club large, not black, only fuscous, the terminal joint unusually large for this genus, acuminate. Head rather narrow, somewhat coarsely punctate. Thorax rather short, punctate like the head, the base feebly sinuate, but the hind angles a good deal prolonged backwards. Elytra somewhat closely punctate and pubescent, the whole of the punctures and pubescence subseriately arranged, and without any more distinct series. Pygidium very densely, coarsely punctate, rounded at the extremity. Prosternal process rather narrow.

A single example of this insect was placed amongst the duplicates of *C. plena*. Although superficially similar thereto in size and colour it is very distinct, and cannot be confounded with any other of our species.

** *Club of the antennæ quite pallid.*

The club is not so large as in the species of Section *, and the apical joint is not so broad; but its colour being quite pallid the insects placed in this Section may be readily recognized as belonging here. They are all very small and have lost the appearance characteristic of the other divisions of the genus.

19. **Cryptarcha thalycroides.**

Cryptarcha thalycroides, Reitter, Verh. Ver. Brünn, xii. 1, p. 146 [1].

Hab. Mexico (*mus. Vindob.* [1]), Jalapa (*Höge*), Guanajuato (*Sallé*); Guatemala, near the city, Dueñas (*Champion*).

Parvula, oblongo-ovalis, sat convexa, testaceo-ferruginea, pubescens, crebrius punctata; elytris crebrius subseriatim punctatis.

Long. 3 millim.

Var. *lateralis*; metasterno elytrisque anterius ad latera fuscescentibus.

Hab. Guatemala, near the city, Capetillo, Zapote (*Champion*).

Reitter states [1] that in Mexico *C. thalycroides* varies in colour; this I am not in a position to speak about, as we have received only two or three Mexican examples of the species. We have eight specimens from Guatemala, and—accepting them all as one species, though as to this I am by no means sure—there is a decided variation of colour, though not corresponding to what Reitter describes as existing in Mexican examples; the fuscescence of the wing-cases, when present, being in the Guatemalan specimens placed at the shoulder, whereas Reitter says that in the Mexican variety it occurs at the middle of the side.

20. **Cryptarcha comma,** sp. n.

Oblongo-ovalis, sat convexa, ferruginea, prosterno apice, pectore scutelloque nigris; pubescens, crebrius punctata; elytris crebrius subseriatim punctatis.

Long. 3–3½ millim.

Hab. Mexico, Guanajuato, Puebla (*Sallé*), Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Although doubtless extremely close to *C. thalycroides*, yet the constancy of the colour in the five examples of *C. comma* before me leads me to think that they are distinct from any of the varieties I have seen of *C. thalycroides*. The prosternal process, the mesosternum, and metasternum are quite black. On the upper surface the scutellum only is black. In other respects this insect greatly resembles *C. thalycroides*, though it has the club of the antennæ slightly larger.

21. **Cryptarcha imbellis,** sp. n.

Ovalis, convexa, sublævigata, nitida, ferruginea, pectore nigricante, elytris subtiliter subseriatim punctatis.
Long. 3 millim.

Hab. GUATEMALA, Calderas, San Gerónimo (*Champion*).

Antennæ with the club clear yellow, elongate. Head small, moderately coarsely punctate, the sides deeply concavely curvate. Thorax large, shining, finely and sparingly, but distinctly punctured. Elytra finely and distantly punctate, without pubescence, the punctures seriate, but not very distinctly so, and exhibiting little difference between those of the series and those of the interstices. Pygidium exposed, rather coarsely and sparingly punctured. Under surface somewhat coarsely punctate, finely but quite distinctly pubescent.

Mr. Champion procured a small series exhibiting no variation at Calderas; at San Gerónimo only one specimen was obtained.

22. **Cryptarcha costaricensis,** sp. n.

Oblongo-ovalis, convexa, nitida, testacea, pectore fuscescente; prothorace nitido, parce obsoleteque punctato; elytris subtilius punctulatis.
Long. $2\frac{1}{2}$ millim.

Hab. COSTA RICA, Volcan de Irazu 7000 feet (*Rogers*).

Head rather coarsely punctate, quite shining. Thorax very shining, sparingly and extremely finely punctate. Elytra with series of exceedingly fine punctures, and between them with an interstitial punctuation differing but little from the serial punctuation. Under surface rather finely punctate, with but little pubescence.

Though closely allied to *C. imbellis* this insect is easily distinguished by the more pallid colour, and by the finer punctuation of the upper surface.

23. **Cryptarcha atomaria,** sp. n. (Tab. XII. fig. 16.)

Oblongo-ovalis, convexa, testacea, lævigata, minus nitida, subtilius parciusque punctulata.
Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This species is distinguished from *C. costaricensis* and *C. imbellis*, not only by its smaller size, but also by the peculiar dull surface. Antennæ clear yellow. Head rather coarsely punctate, quite dull. Thorax with a distant and very minute punctuation; the surface quite dull. Elytra quite dull, with numerous series of very fine punctures, without interstitial punctuation. Under surface ferruginous, quite sparingly punctate.

Two specimens.

Aberrant species, subdepressed and unusually elongate, with more imperfect articulation between the prosternal process and mesosternum: the former of these smaller than usual.

24. **Cryptarcha elongata,** sp. n. (Tab. XII. fig. 17.)

Cryptarcha elongata, Reitter, Verh. Ver. Brünn, xii. 1, p. 143 [1].

Oblonga, subdepressa, picea, subtilissime pubescens, crebrius punctata; corpore subtus, antennis pedibusque rufis, antennarum clava picea.

Long. $6\frac{1}{2}$ millim.

Hab. Mexico (*mus. Vindob.* [1]), Guanajuato (*Sallé*), Esperanza (*Höge*).

Head large, moderately closely and coarsely punctate, shining. Thorax strongly transverse, nearly straight at the base, evenly, moderately coarsely and closely punctate, very minutely pubescent. Scutellum finely punctate. Elytra elongate, rather flat, moderately closely punctate, the punctuation subseriate, and including some indistinct distant series of punctures differing very little from the other punctuation. Pygidium exposed, closely and finely punctate. Male with the apical portion of the right mandible slightly more elongate than it is in the female.

This species is quite different from any other *Cryptarcha*, and I have no doubt that it is generically distinct therefrom; but as I have not discovered any salient character to distinguish it, I must place it at present as an aberrant member of the genus.

The following species I have not been able to identify with any *Cryptarcha* we have received:—

25. **Cryptarcha fusca.**

Cryptarcha fusca, Er. in Germar's Zeitschr. iv. p. 356 [1]; Reitter, Verh. Ver. Brünn, xii. 1, p. 146 [2].

Hab. Mexico [1 2].

This, having the antennal club concolorous, probably belongs to group § 2 B**, but must be larger than any insect we have obtained of that group. In the collection at the British Museum a specimen of *C. guatemalena* has been determined by Murray as *C. fusca*, Er., but this is certainly a mistake.

26. **Cryptarcha aclypta.**

Cryptarcha aclypta, Reitter, Verh. Ver. Brünn, xii. 1, p. 142 [1].

Hab. Mexico (*mus. Vindob.*[1]).

I think this must certainly be a species of which we have not received an example, and possibly near *C. plena*; it is said to have punctate-striate elytra, and no mention is made of any sculpture on the interstices.

27. **Cryptarcha clavata.**

Cryptarcha clavata, Reitter, Verh. Ver. Brünn, xii. 1, p. 144 [1].

Hab. Mexico (*mus. Vindob.* [1]).

LEPIARCHA, gen. nov.

Prosternum processu parvo. Coxæ omnes parum distantes; metasternum inter coxas intermedias productum, acuminatum, subtiliter marginatum.

The little insect for which I establish this genus cannot remain in *Cryptarcha*, the diminution in size of the prosternal process and the more approximate middle coxæ being accompanied by other minor characters that prove the genus to be truly distinct. The male mandibles are elongate, slender, and equal; in those males of *Cryptarcha* that have elongate mandibles these are unequal. The elytra are ample, entirely covering the body, and the epipleuræ are broad. The palpi are small and slender, and the tibiæ, too, are slender.

Probably the North-American *Cryptarcha concinna* belongs to this genus.

1. **Lepiarcha omositoides.** (Tab. XII. fig. 18, ♂.)

Cryptarcha omositoides, Reitter, Verh. Ver. Brünn, xii. 1, p. 151 [1].

Hab. Mexico (*mus. Vindob.* [1]); Guatemala, Capetillo, San Gerónimo (*Champion*).

We have only received two specimens of this insect, and though I have not seen any individual from Mexico, I think they will prove to belong to the species Reitter described from there under the above name.

We figure the male; the female has very short mandibles.

LIARCHA, gen. nov.

Corpus ovale, fere lævigatum. Mandibulæ ad apicem graciles, intus membrana grandi auctæ; maris elongatæ.

Though the curious membrane with which the mandibles are provided seems at first sight an amply sufficient character for this genus, yet it is not really so, as a similar though less highly developed membrane exists in several species of *Cryptarcha*, e. g. *C. inæqualis*. There are, however, other characters that render the genus a perfectly good one—the middle of the metasternum being without any margin in front, and the mesosternum completely consolidated with it on one plane. The mandibles are equal, acuminate, and though appearing simple at the tip are really bifid, the notch being placed on the under surface. All the coxæ are widely separated and the prosternal process is large.

1. **Liarcha placida,** sp. n. (Tab. XII. fig. 19, ♂.)

Ovalis, sat convexa, testacea, vage fusco-nebulosa, antennarum clava fusca; subnitida, subtiliter parce punctata.

Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Mirador, Jalapa (*Höge*), Temax in North Yucatan (*Gaumer*); Guatemala, San Isidro (*Champion*); Costa Rica.

Upper surface without any trace of pubescence. Head moderately coarsely punctured, bisinuate at the sides. Thorax strongly transverse, the base nearly straight, the hind angles much rounded; more finely punctate than the head. Elytra sparingly and finely punctate. Under surface with some very fine, extremely short, hairs. In the male the mandibles are longer than they are in the female; there is a very short transverse supplementary dorsal segment exposed at the apex of the pygidium; on the ventral surface the last ventral plate is sinuate behind, and the supplementary segment is seen as a linear curve; these parts are pubescent.

Herr Höge procured a good series of this species at Mirador, but from the other localities we have received only a small number of examples. Those from Yucatan are less shining, darker in colour, more finely punctate, and have the breast blackish; those from Guatemala are also a little different from the Mirador series. But at present they had better be treated as all pertaining to one species, the differences being but slight.

We figure a male from San Isidro.

PITYOPHAGUS.

Pityophagus, Shuckard, Elements of Brit. Ent. p. 171 (1839) [1]; Horn, Trans. Am. Ent. Soc. vii. p. 324 [1].

Ips (partim), Erichson, in Germar's Zeitschr. iv. p. 358 [2].

This genus consists of six species—one European, one occurring in Japan, three in N. America, and one in Mexico; I now add another from the extreme north of our region. All the species of *Pityophagus* live, I believe, in the bark of Coniferæ. Though at first sight extremely similar to one another they are distinguished by important characters: our species, indeed, possesses a most peculiar structure of the front of the head.

Although the genus was not admitted by Erichson [2], it is, as pointed out by Horn [1], structurally very distinct from *Ips*, and there cannot be any further doubt as to its validity.

1. **Pityophagus insignis,** sp. n. (Tab. XII. fig. 20.)

Elongatus, niger, sat nitidus, fortiter punctatus; antennis piceis.
Long. 6–8 millim.

Hab. Mexico (*Flohr*), Pinos Altos in Chihuahua (*Buchan-Hepburn*).

Head very large, closely and coarsely punctured; eyes small; the vertical depression deep though rather ill defined, transverse. Thorax subquadrate, rather coarsely punctate, the punctures elongate. Elytra more finely punctate than the thorax and not so shining; with a distinct sutural stria, evanescent in front. Pygidium large, densely punctate; apical margin much elevated.

Three specimens.

The species of *Pityophagus* much resemble one another, but *P. insignis* is distin-

guished by a very curious character, the epistome being deflexed and perpendicular in front and bearing there two large and deep foveæ in the middle. In *P. rufipennis*, Horn, the epistoma is not deflexed, but is separated from the head by a well-marked suture, and its front margin has a deep transverse impression on each side. In the European *P. ferrugineus* the epistome is small and appears to me simple, though probably dissection might show this not to be really the case.

2. **Pityophagus arcuatus.**

Ips (*Pityophagus*) *arcuatus*, Er. in Germar's Zeitschr. iv. p. 360 [1].

Hab. Mexico [1].

This insect is quite unknown to me.

IPS.

Ips, Fabricius, Gen. Ins. p. 23 (1776) ; Erichson, in Germar's Zeitschr. iv. p. 358.

This genus includes about twenty species distributed in the Palæarctic and Nearctic regions. Species assigned to it from other regions probably do not belong to it.

1. **Ips ultimus,** sp. n. (Tab. XII. fig. 21.)

Elongatus, parallelus, subdepressus, parce subtiliterque punctatus, sat nitidus, niger ; elytris rufis, apice maculaque laterali utrinque nigris.

Long. $6\frac{1}{2}$ millim.

Hab. Mexico, Jacale (*Sallé*), Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Head very finely punctate ; epistome with a transverse fovea on each side in front. Thorax subquadrate, the sides a little narrowed behind but not sinuate ; surface very finely punctate. Elytra finely and moderately closely punctate, red, with the apical third black, and with a black spot just in front of the middle.

We have received only two examples ; both appear to be of the male sex.

2. **Ips (?) fuscipennis.**

Ips fuscipennis, Cast. Hist. Nat. Ins. Col. ii. p. 14 [1].

Hab. Mexico [1].

Nothing is known of this insect ; from the size given we may be sure that it is not an *Ips*. If the type cannot be found, I do not think the species can ever be satisfac-factorily identified from the description alone.

IPSIMORPHA.

Ipsimorpha, Reitter, Verh. Ver. Brünn, xii. 1, p. 165 (1873).

This is a genus containing two species from Mexico. Reitter places it at the end of the family. We have received nothing that I can assign to it.

1. **Ipsimorpha striato-punctata.**

Ipsimorpha striatopunctata, Reitter, Verh. Ver. Brünn, xii. 1, p. 165 [1].

Hab. Mexico [1].

2. **Ipsimorpha ruficapilla.**

Ipsimorpha ruficapilla, Reitter, Mitth. Münch. ent. Ver. i. p. 130 [1].

Hab. Mexico (*Bilimek* [1]).

Fam. TROGOSITIDÆ *.

The catalogue of this family recently published by M. Léveillé (Ann. Soc. Ent. Fr. 1888, pp. 431–448) includes 335 species. About 100 species are here recorded from our region, and as between sixty and seventy appear to be new, the described representatives of the family will now reach about 400.

No extensive or well-named collection of Trogositidæ exists in this country; I should, therefore, have experienced some difficulty in determining the species previously known had it not been for the kindness of M. Léveillé of Paris, who examined for me a nearly complete series of the species hereafter enumerated. I am glad to take this opportunity of thanking him for his assistance.

Subfam. *NEMOSOMATINÆ.*

NEMOSOMA.

Nemozoma, Latreille, Nouv. Dict. d'Hist. Nat. 1st ed. xxiv., Tab. Méth. p. 157 (1804); Gen. Crust. et Ins. iii. p. 12.

Nemosoma, Latreille, Gen. Crust. et Ins. iv. p. 381 (1809).

This genus consists of two or three European species, to which Reitter has added one from Colombia, founded, I believe, on a single example. The Colombian insect differs from the European type, according to Reitter, in possessing 11-jointed antennæ. In this respect the species I now describe from our region agrees with the Colombian one, and the two may therefore prove to be really congeneric. There is little doubt they will have to form a genus distinct from *Nemosoma*, as, besides the difference in the number of joints of the antennæ, the trophi are more largely developed in the Guatemalan *N. signatum*.

1. **Nemosoma signatum,** sp. n. (Tab. XII. fig. 22.)

Elongatum, angustum, nigrum, supra æneum, elytris signaturis quatuor testaceis, antennis pedibusque rufis. Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. Guatemala, Quiche Mountains, 7000 to 9000 feet, Totonicapam 8500 to 10,500 feet (*Champion*).

* By D. Sharp.

Head large, elongate, deflexed, subincrassate in front and depressed along the middle, rather coarsely, moderately closely punctate. Thorax smaller than the head, finely margined at the base and sides, the lateral margin quite disappearing before reaching the front margin, the sides narrowed behind the middle to the base, the hind angles very obtuse, the surface punctured like the head. Elytra narrow and elongate, shining, brassy, each with a large pallid mark extending backwards from the shoulder and curving inwards towards the suture, and also with a large transverse spot just behind the middle; they are rather coarsely and irregularly, subseriately punctate. Legs slender, pale red. Seven specimens.

CYLIDRELLA, gen. nov.

Corpus parvum, lineare; abdomine elongato, segmentis quatuor ab elytris haud obtectis.

The little insect for which this name is proposed has more the appearance of a minute species of *Cylidrus*—an aberrant genus of Cleridæ—than of any Trogositid known as yet; nevertheless, although I have only one example for study, I have no doubt that its systematic affinities are with *Nemosoma*. The head is elongate, produced in front into a free, bilobed process overhanging the base of the mandibles. The eyes are moderate in size, subcircular, not prominent, finely faceted. The antennæ are apparently 10-jointed, but the funiculus is ill-developed and its joints not easy to count: the basal joint is free, moderately large, 2nd joint much smaller, 3–7 small, 8–10 forming an elongate club, the 8th and 9th rather transverse, 10th subcircular. Labrum not distinct; mandibles large and prominent, directed downwards. Palpi small; terminal joint of the maxillary pair small, acute, but with the apex minutely truncate. Labium concealed. Prosternum greatly compressed between the coxæ, which are large and extend to the sides of the thorax; middle and hind coxæ contiguous. Hind-body elongate, with six ventral segments, the basal five subequal, the terminal one smaller. Legs slender; the front and middle tibiæ denticulate externally, without terminal spurs; tarsi filiform and slender, their joints difficult to count, but apparently five in number, the basal one short and concealed.

1. **Cylidrella mollis,** sp. n. (Tab. XII. fig. 23.)

Elongata, subcylindrica, angusta, nigra, elytris abbreviatis in medio sordide albidis, tarsis antennarumque basi testaceis.

Long. $3\frac{1}{4}$ millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Antennæ short, joints 1–7 sordid yellow, the club nearly black. Head very elongate, deflexed towards the front, and canaliculate on the anterior part; sparingly punctate. Thorax long and narrow, a little narrowed behind, without raised margins, shining black, sparingly punctate. Elytra covering only about half of the elongate

hind-body, black, with a broad pale mark across the middle; only obsoletely punctured, the black apical portion impunctate and shining.

The unique example found of this curious little insect is probably a female.

Subfam. *TEMNOCHILINÆ.*

CORTICOTOMUS, gen. nov.

Corpus parvum, cylindricum. Oculi minus fortiter granulati. Antennæ undecim-articulatæ; clava maxima, laxissime articulata. Mandibulæ breves, superne fere curvatæ. Tibiæ subinermes, anteriores et intermediæ ad apicem denticulatæ.

This genus is proposed for some small Trogositids having somewhat the appearance of *Corticeus* (*Hypophlœus*), a well-known genus of Heteromera. It should, I think, come near *Airora*, which it somewhat resembles in the peculiar form of the head and in the mouth-parts, but from which it departs greatly by the large club of the antennæ and the comparatively feeble legs. The head above is somewhat hollowed, and when looked at in profile it is seen that the mandibles are to a slight extent directed upwards. The clypeus appears to be straight in front, but on examination it is seen that there is an extremely short, broad, truncate lobe in the middle, and to this the broad labrum is attached; it is slightly emarginate. The eyes are transverse, placed quite at the sides of the head. The mouth is placed quite at the front of the head. The short broad mentum is vertical in its direction. The palpi are short, rather stout, subacuminate at the apex. The prosternal process is abruptly bent upwards, behind the coxæ; the metasternum is elongate. The front tibiæ are short, very slender at the knee, but much broader at the extremity, and on the most prominent part they are feebly bidenticulate, and are armed at the apex with a stout curved mucro; the middle tibiæ bear three denticles at the extremity, and one or two very minute asperities in the middle. All the tarsi are slender, joints 2–4 elongate, subequal. Front coxæ rather large, with the trochantins visible, the middle and hind coxæ only slightly separated.

Corticotomus has more the facies of *Colydobius* than of any other Trogositid I am acquainted with, but I cannot think it closely allied thereto, the mandibles being very different in the two; these organs in *Corticotomus* have a strongly curved acuminate extremity and a single small denticle placed near the base.

1. **Corticotomus basalis,** sp. n. (Tab. XII. figg. 24; 24 *a*, front tibia.)

Subcylindricus, piceus, antennis articulis 1°–8^{m}, pedibus elytrisque basin versus rufescentibus; capite prothoraecque crebre sat fortiter punctatis, subnitidis; elytris in parte basali subtiliter seriatim punctatis, punctis apicem versus minutissimis.

Long. 4 millim.

Hab. GUATEMALA, Las Mercedes, Mirandilla (*Champion*).

Thorax straight at the sides, the basal margin indistinct, the lateral margins excessively fine; hind angles depressed, quite rounded and indistinct. Scutellum not visible. Elytra not margined at the base; bearing a serial punctuation which is distinct at the base but soon becomes excessively fine, and at the apex the minute punctures can scarcely be detected. Nine examples.

Seven individuals received of this species are all very similar, but the remaining two, being somewhat immature, have the elytra more dilute in colour, the surface, indeed, in one of them is entirely testaceous.

2. **Corticotomus gracilis,** sp. n.

Angustus, cylindricus, piceus, antennis pedibusque pallide rufis, elytris plagis quatuor magnis testaceis.
Long. $3\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ, including the club, pale red. Head ferruginous, shining, closely punctured. Thorax elongate and narrow, parallel; basal and lateral margins distinct; surface moderately closely and finely punctured. Elytra with four large yellow marks, occupying the larger part of the surface, but leaving the suture, the sides, and a band across the middle dark; the sculpture is very indistinct, but the surface is not polished. Legs reddish-yellow. Two specimens.

AIRORA.

Airora, Reitter, Verh. Ver. Brünn, xiv., Abhandl. p. 18 (1876).

Eight species are known of this genus; it is peculiar to the New World, where it extends from the United States of N. America to Paraguay.

1. **Airora yucatanica,** sp. n. (Tab. XIII. figg. 1; 1 *a*, antenna.)

Cylindrica, nigra, nitida; capite prothoraceque fortiter punctatis; elytris subtiliter striatis, striis sat fortiter punctatis, punctis elongatis, inter se sat remotis, interstitiis vix transversim convexis.
Long. 10 millim.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

This is readily distinguished from the other species of *Airora* found in our region by the smaller sensitive area on the joints of the club of the antennæ; it is very similar to the N. American *A. cylindrica*, but in that species the sculpture of the elytra is coarser and deeper, the punctures in each stria being only very slightly separated from one another by the short, very feebly elevated interstices.

I have examined four examples of *A. yucatanica*; the male differs from the female in having the large punctures on the ventral segments a little smaller, and in having numerous, much finer punctures mixed with the larger.

2. **Airora pollens,** sp. n.

Cylindrica, nigra, nitida, capite prothoraceque fortiter punctatis; elytris striatis, striis sat fortiter punctatis, punctis elongatis, inter se sat remotis, interstitiis vix transversim convexis.
Long. 14–15 millim.

Hab. Mexico, Tepanistlahuaca (*Sallé*), Temax in North Yucatan (*Gaumer*).

I have seen only two examples of this insect, and have hesitated whether I should treat it as a variety of large size of *A. yucatanica*; I think, on the whole, it is more likely to prove distinct. The joints of the club of the antennæ are rather larger, and the pits containing the sensitive pubescence are larger, especially the one on the ninth joint. The sculpture is a little coarser.

The two examples are male and female. In the former sex the small sexual punctures on the ventral plates are more numerous and definite than they are in *A. yucatanica*.

3. **Airora longicollis.**

Trogossita longicollis, Guér. Icon. Règne Anim. iii. p. 200[1].
Airora clivinoides, Reitter, Verh. Ver. Brünn, xiv., Abhandl. p. 19[2].
Airora longicollis, Léveillé, Bull. Soc. Ent. Fr. 1889, p. xlv.

Hab. Mexico[2], Cordova, Jalapa (*Höge*); Guatemala, Pantaleon, Mirandilla (*Champion*); Nicaragua, Chontales (*Janson*).—Colombia, Bogota[2]; Brazil[2].

We have received a series of about twenty examples of this species; it is readily distinguished from *A. centralis* by its small size and slender form, and by the fact that the elytra are finely striate, the striæ somewhat remotely punctured, and the interstices bearing a series of fine remote punctures along the middle of each. I cannot detect any character whereby to identify the sexes.

4. **Airora centralis,** sp. n. (Tab. XIII. figg. 2; 2 *a*, antenna.)

Cylindrica, nigra, sat nitida; capite opaco, sat parce et subtiliter punctato; prothorace suboblongo, sat crebre et fortiter punctato; elytris seriatim fortiter sat numerose punctatis, interstitiis planis, parce subtilissime punctatis.
Long. 12–13 millim.

Hab. Mexico, Orizaba (*Sallé*); Guatemala, El Reposo, Pantaleon Torola (*Champion*); Panama, Bugaba (*Champion*).

This may be distinguished from the other species here enumerated by the dull and less coarsely punctate head, as well as by the elytra being not at all striate, the very definite punctures being arranged in regular rows, and being smaller near the apex. We have received seven examples; but I do not detect any sexual distinctions.

A. centralis agrees in many respects with Reitter's description (Verh. Ver. Brünn, xiv., Abhandl. p. 20) of the Antillean *A. striato-punctata*; but that species is said to have the interstices subcostate, and a deeply impressed sutural stria.

TEMNOCHILA.

Temnoscheila, Westwood, Zool. Journ. v. p. 231 (1835).
Temnochila, Gemminger & Harold, Cat. iii. p. 839.

This genus includes about sixty-five species, and has a wide distribution. By far the larger number of its representatives, however, are limited to the New World, where it extends from the United States of North America to Uruguay.

Several species have been recorded by Reitter as occurring in our region that have not been met with by any of the collectors employed by the editors of this work. I have little doubt that some of these *Temnochilæ* have been improperly assigned to Central America: the material used by Reitter was gathered from very various sources, a large part of it coming from old collections, in which, as is well known, mistakes as to localities are by no means infrequent.

There is a great general resemblance between the species of *Temnochila*, so that it is difficult to distinguish them by diagnostic characters. An inspection of the following Key will give an idea of the arrangement I have adopted, and thus facilitate the determination of our species:—

Front tibiæ digitate at the apex externally. (Species 1, 2, forming group A.)
Tibiæ not digitate at the apex externally.
Prothorax with the lateral margins more or less thick, and the front angles more or less produced. Groups B to F.
Prosternum with a margin in the middle behind, connected on either side with the apices of the epimera . . . Group B. Species 3–6.
Prosternum behind the coxæ excessively coarsely punctate but not margined; mandibles short . . . . . Group C. Species 7.
Prosternum behind the coxæ not margined, excessively coarsely punctate; mandibles and labium elongate . . . Group D. Species 8.
Prosternum behind the coxæ smooth, not conically prominent, without margin; mandibles and labium short . . Group E. Species 9–25.
Prosternum with conically protuberant and polished apex. Group F. Species 26–31.
Prothorax with the lateral margins extremely fine, the front angles not at all produced . . . . . Group G. Species 32–43.

Group A.—*Anterior tibiæ thicker towards the extremity, with the outer angle somewhat prolonged and acuminate.* (Species 1, 2.)

1. **Temnochila digitata,** sp. n. (Tab. XIII. figg. 3; 3 *a*, anterior tibia.)

Fusca, supra ænescens, convexa, antennis pedibusque rufis vel piceis; capite angusto, anterius canaliculato, canalicula lata, minus profunda, ad fundum plana; prothorace sat crebre et fortiter punctato, ad latera utrinque pone medium profunde impresso, post impressionem evidenter quasi-denticulato; elytris seriatim subtiliter punctatis, interstitiis parce remote subtiliterque punctatis.

Long. 10–15 millim.

Mas, area submentali dense punctata, pubescente, medio fascicula latissima pilorum agglutinatorum; area interoculari opaca; abdomine irregulariter punctato, punctis majoribus sparsis, punctis adjectis haud numerosis, minus subtilibus.

Fem., area submentali fortiter punctata, tenuiter pubescente; abdomine segmento ultimo ventrali in medio ad apicem late vage elevato.

Hab. British Honduras (*Blancaneaux*); Nicaragua, Chontales (*Janson, Belt*); Panama, Bugaba (*Champion*).

Var.? Minor (long. 7½ millim.), magis depressa, colore viridi-aurato.

Hab. Panama, Bugaba (*Champion*).

The peculiar form of the front tibiæ distinguishes this species from all others yet found in our region except the following, which is quite different in colour.

The species appears to be rare, as we have received only eight examples of it; of these three are males: as they come from widely-separated localities, and differ somewhat from one another, I think it possible that more ample material may prove that I am including three or even four species under the name of *T. digitata*. The type specimens are the large form found at Chontales by Janson, one of which was received by me many years ago. The small variety specially mentioned above is pretty certainly distinct, though, as we have received only a single specimen of the female sex, I do not so treat it at present.

No mention is made by previous writers of any species of *Temnochila* possessing such a form of front tibia as that found in *T. digitata*.

2. **Temnochila leveillæi**, sp. n. (Tab. XIII. fig. 4.)

Minus elongata, transversim convexa, nigricans, supra purpureo-aurata, capite ænescente, prothoracis lateribus argute læteque viridescentibus; capite prothoraceque angustis, hoc subtilius marginato, parce subtiliusque punctato; elytris obsolete seriatim punctatis.

Long. 7–10 millim.

Mas, area submentali medio fasciculo lato armata; abdomine segmentis 2°–4^{m} fere ubique punctis adjectis numerosis, marginibus posterioribus lævigatis, subincrassatis.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This is one of the most distinct species of the genus; the comparatively narrow head and thorax, the short antennæ, the remarkable coloration, and the structure of the front tibiæ will allow it to be easily identified. There is no margin on the prosternum behind the coxæ. The groove on the head is of the flat peculiar form seen in *T. digitata*. The submental area is unusually small, and in the female is without positive characters. The viridescent colour at the sides of the thorax is remarkably sharply defined from the ground-colour, and just at the line of junction there is an extremely delicate line of darker colour.

We have received eight specimens of this interesting *Temnochila*. I have named it in honour of M. Léveillé, who has kindly assisted me by examining a series of the Central-American species of *Temnochila*.

Group B.—*Prothorax with thick lateral margins. Prosternum behind the prosternal process with a margin connected on either side with the tips of the epimera.* (Species 3–6.)

3. Temnochila chevrolati.

Trogosita chevrolati, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 12 [1].

Sat angusta, convexa, nitida, ænescens vel nigro-ænescens, antennis piceo-rufis, articulo basali anterius ænescente; capite angusto, crebre punctato; prothorace elongato, basi leviter rotundato; elytrorum humeris anterius acutis; prosterno inter coxas plano vel subimpresso, posterius sat distincte marginato; abdomine crebre fortiter punctato.

Long. 9–16 millim.

Mas, area submentali setosa, medio fasciculo magno armata; abdomine segmentis 2° et 3° utrinque punctis paucis minutis inter puncta majora adjectis.

Fem., abdomine segmento apicali medio parum discrete triangulariter deplanato.

Hab. Mexico [1], Bobo, Las Vigas, Misantla, Jalapa (*Höge*), Cordova, Toxpam, Tuxtla, Santecomapan, Orizaba, Playa Vicente (*Sallé*), Temax in North Yucatan (*Gaumer*); Guatemala, Teleman, Las Mercedes, Pantaleon, Mirandilla (*Champion*); Salvador (*Ulex*).—South America, Brazil [1].

This species is extremely variable in size, and the punctuation of the ventral segments is also variable to a considerable extent. It may, however, be always recognized amongst its allies by the narrow, numerously punctured head, the thorax with the base gently rounded and not in the least sinuate, the well-marked acute angles of the elytra, the unimpressed or only obscurely impressed prosternum, and the sexual characters. The last ventral segment of the female is not truly impressed, but has a rather extensive, somewhat triangular, deplanation of the surface in the middle. In the large males the sexual supplementary punctures at the sides of the ventral plates are distinctly seen, though confined to a quite small space; but in the small males only a few of these punctures exist, and may readily be overlooked.

Herr Höge procured a large number of examples at Bobo, and these exhibit the great variation in size remarked on above; the series does not include, however, any specimens quite so large as those he met with at Misantla or Jalapa. Outside Mexico the species would appear to be rare, only two females having been procured at Mirandilla, and one in each of the other localities, and as these few specimens are rather aberrant, and the male is unknown from there, it is just possible they may prove to be distinct, but this I think is extremely improbable. These females have, however, the ventral segments decidedly more sparingly punctate than usual.

We have no evidence of the occurrence of *T. chevrolati* in our region more to the south than Salvador or Guatemala, so that its existence in Brazil, as recorded by Reitter [1], is open to considerable doubt.

4. **Temnochila guatemalena,** sp. n.

T. chevrolati proxime affinis, sed minor, nitidior, prosternoque inter coxas argute impresso.
Long. 8–11 millim.
Mas, area submentali breviter setosa, medio fasciculo armata.
Fem., abdomine segmento ultimo ventrali ad apicem leviter transversim impresso.

Hab. Mexico, Orizaba, Parada (*Sallé*); Guatemala, Pantaleon, Zapote (*Champion*); Panama, Bugaba (*Champion*).

Although certainly very closely allied to the smaller and less punctate varieties of *T. chevrolati*, I have little doubt that *T. guatemalena* is truly distinct. The surface of the thorax is of a more shining brassy colour, the minute punctuation between the larger punctures being finer. In the male the pubescence on the submental area is shorter, and the median fascicle altogether smaller, and there is no supplementary sexual sculpture on the sides of the ventral plate; in the female the impression on the terminal segment is different in shape, extending less forwards and being more distinct on each side at the hind margin; and in both sexes there is a quite definite impression of the prosternum between the front coxæ.

Mr. Champion obtained a series of eighteen specimens at Pantaleon, agreeing satisfactorily, except that three of them are of the larger size (11 millim. long); from each of the other localities only one example is present, but they appear truly to belong to this species, though each of them differs slightly in unimportant details.

Reitter has described two species closely allied to *T. chevrolati*, viz. *T. steinheili* and *T. lævicollis*, and each agreeing in certain respects with *T. guatemalena*. *T. steinheili*, from Colombia, is said, however, to have a large angular impression (like that of *T. chalcea*, I suppose) on the last ventral plate of the female. *T. lævicollis* was described from a single male to which the locality Cayenne? was assigned, and is said not to have the anterior angles of the thorax acute, and to have no minute punctures on the thorax. It is impossible, therefore, to reconcile our *T. guatemalena* with either of these species.

5. **Temnochila quadricollis.** (Tab. XIII. figg. 5; 5 *a*, underside of head; 5 *b*, posterior part of middle of prosternum.)

Trogosita quadricollis, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 15[1].

Latiuscula, subopaca, ænescens, antennis piceis vel nigro-piceis, articulo basali anterius ænescente; capite lato, parce punctato, punctis in partem anteriorem persubtilibus; prothorace haud elongato, longitudine quam latitudine evidenter breviore, posterius angustato, basi subtruncata, leviter bisinuata; elytris humeris anterius subobtusis, nullo modo prominulis, subopacis, seriatim sat fortiter punctatis, interstitiis sat fortiter punctatis; prosterno in medio impresso.
Long. 11–18 millim.
Mas, area submentali setosa, medio fasciculo magno armata; abdomine segmentis 1°–4^{m} punctis minutis, haud numerosis sed fere ubique adjectis.
Fem., abdomine segmento anali fere simplice, in medio tantum vage et obsolete impresso.

Hab. Mexico[1], Presidio de Mazatlan (*Forrer*), Bobo, Las Vigas (*Höge*), Temax in

North Yucatan (*Gaumer*); GUATEMALA, Pantaleon (*Champion*); NICARAGUA, Chontales (*Belt, Janson*); PANAMA, Bugaba, Tolé (*Champion*).

We have received a good series of this species, it having been met with in numbers by Mr. Champion at Pantaleon, while in Mexico Höge procured about twenty examples. There is no difficulty in distinguishing it from *T. chevrolati*, except in the case of the smaller and more shining varieties, as a glance at the form of the thorax behind, at the less acute front angles of the elytra, and the comparatively sparse punctuation of the head will enable the species to be recognized with certainty. To the characters mentioned in the diagnosis may be added that in the female the few punctures on the submental area are much finer than they are in *T. chevrolati*, while, on the other hand, the punctures on the mentum are remarkably coarse. The minute supplementary male punctuation, though only scanty, is scattered among the larger punctures over a much greater area of the segments.

I think there is little doubt that this is the *T. quadricollis* of Reitter, which was described from a single example of the male sex. Though he says of the species that the prosternum is "vix aut leviter impresso," and though it is quite distinctly and constantly impressed in our insect; yet as he used an alternative while speaking of only a single example it is pretty clear that he did not very well see the prosternum, but noticed that it was to some extent impressed.

The specimens labelled *T. quadricollis* in Sallé's collection all belong to *T. chevrolati* or to *T. chalcea*.

T. cribricollis, Reitter (*t. c.* p. 16), appears to be very similar to *T. quadricollis*, and I should not be surprised if they prove to belong to the same species.

6. Temnochila chalcea.

Temnochila chalcea, Kirsch, Berl. ent. Zeitschr. 1873, p. 149[1].

Trogosita chalcea, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 13[2].

Ænescens, sat nitida, antennis rufo-piceis, articulo basali anterius ænescente; prothorace subquadrato, longitudine et latitudine fere æqualibus; elytris humeris acutis, evidenter seriatim punctatis, interstitiis obsolete parce punctatis; prosterno inter coxas leviter impresso.

Long. $10\frac{1}{2}$–16 millim.

Mas, area submentali setosa, medio fasciculo sat crasso armata; abdomine segmentis 1^{o}–4^{m} utrinque prope latus punctis paucis minutis inter puncta majora adjectis.

Fem., abdomine segmento ultimo ventrali in medio ad apicem subtriangulariter profunde et argute depresso.

Hab. MEXICO, Bobo, Las Vigas (*Höge*), Cordova (*Höge, Sallé*), Tuxtla, Santecomapan, Parada (*Sallé*); BRITISH HONDURAS, Cayo, Belize (*Blancaneaux*); GUATEMALA, El Tumbador, El Reposo, Las Mercedes, San Ysidro, Volcan de Atitlan, Pantaleon, Mirandilla, Zapote, Tamahu, Sabo, Panzos (*Champion*), Yzabal (*Sallé*); NICARAGUA, Chontales (*Belt, Janson*); COSTA RICA? (*Van Patten*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*), on the Isthmus (*Salvin*).—SOUTH AMERICA[2], Bogota (*coll. Sharp*), Peru[1].

T. chalcea is in several characters intermediate between *T. chevrolati* and *T. quadricollis*; this is the case as regards the general form, the punctuation of the head, the proportions of the thorax, and the acuteness of the humeral angle of the elytra. The female of *T. chalcea* may, however, be immediately recognized by the remarkably deep and definite depression on the last ventral segment. The male is not easy to discriminate at first sight from the two species mentioned; but *T. chalcea* nevertheless presents a slight peculiarity in the punctuation of the elytra in both sexes, which, after it has once been recognized, enables its individuals to be separated with ease from those of the allied species. This consists in the fact that whereas in *T. chevrolati* and *T. quadricollis* there is but little difference between the punctuation of the interstices and the striæ, both being serial and of nearly equal coarseness, in *T. chalcea*, on the other hand, there is a strongly marked difference in this respect, owing to the punctuation of the interstices being much reduced; indeed in extreme cases it is almost entirely absent, and the elytra bear only widely separated series of punctures.

In the female of *T. chalcea* there is but little difference between the size of the punctures on the submental area and on the mentum.

T. chalcea appears to be an abundant species throughout our region from Central Mexico southwards, and is probably equally common in the northern parts of South America. The exponents of the species in Sallé's collection are labelled *T. quadricollis*, Reitter; and it is indeed far from impossible that if the type example of Reitter's species can be examined it may prove to belong to this and not to the preceding species.

Group C.—*Prothorax with moderately stout lateral margin. Prosternum very coarsely punctate at the apex, but without margin. Mandibles short.* (Species 7.)

7. **Temnochila geminata,** sp. n.

Sat lata et convexa, nigro-ænescens, supra aureo-ænea, antennis piceis, articulo basali anterius ænescente; capite parce punctato; prothorace sparsim fortiter punctato, punctis ante scutellum ad basin utrinque magis confertis; elytris subtiliter et remote seriatim punctatis, interstitiis fere sicut seriebus punctatis.

Long. 13–15 millim.

Mas, area submentali parce punctata et pubescente, medio fasciculo magno armata; segmentis ventralibus punctis adjectis parcis et subtilibus, parum conspicuis.

Fem., abdomine segmento ultimo ventrali in medio ad apicem profunde impresso.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

This species is remarkable by the very coarse punctuation of the middle of the prosternum behind the coxæ; in front of the coxæ the punctuation also is unusually coarse on each side. *T. geminata* is similar in size and form to *T. chalcea*, but is very different in the punctuation of the thorax and elytra, and no trace can be seen of the prosternal margin behind the coxæ. It is more nearly allied to the Demeraran *T. foveicollis*, Reitter; but that species has the serial punctures on the elytra remarkably distinct, while the interstitial punctures are even finer than they are in *T. geminata*,

and in fact can only be detected with difficulty. Moreover, in the female of *T. foveicollis* the last ventral segment is almost unimpressed, while in *T. geminata* the impression on this segment is larger and more distinct than usual, the species being in this respect intermediate between *T. chalcea* and *T. chevrolati*.

We have received only four examples of *T. geminata*.

Group D.—*Prosternum behind the coxæ not margined, excessively coarsely punctate. Mandibles and labium elongate.* (Species 8.)

8. **Temnochila salvini,** sp. n. (Tab. XIII. fig. 6.)

Elongata, sat convexa, nigro-ænea, supra ænea, pedibus nigris, antennis piceo-nigris; capite prothoraceque elongatis, dense fortiter punctatis, hoc post medium profunde impresso; elytris densius punctatis.

Long. 10–15 millim.

Mas, area submentali medio tuberculo sat magno sed perparum elevato; segmentis ventralibus 2°–4^{m} sat crebre fortiter punctatis, inter puncta majora punctis minutis parum numerose adjectis.

Fem., area submentali lævigata; abdomine segmentis ventralibus 2°–4^{m} crebre fortissime punctatis.

Hab. Panama, Bugaba, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

We have no other species that can be confounded with this, on account of the very dense punctuation of the elytra. The large depression on the thorax is broad, and does not extend forwards beyond the middle, and has no trace of longitudinal elevation in it; there is a much smaller depression on each side between the middle and the side, but no smooth space near the front angles.

T. salvini is allied to *T. punctatissima*, Reitter, and *T. rugulosa*, Kirsch, but differs in several points from the descriptions of those species, so that I have no doubt of its being distinct from them; indeed in *T. rugulosa* the punctures on the elytra are a great deal denser than in *T. salvini*, although in this latter species they are much closer than in any other found in our region. The species of this group are almost entitled to generic distinction owing to the ligula being elongate, so that the labial palpi are placed far in front of the mentum.

We have received a small series of *T. salvini*, exhibiting very little variation, except in size.

Group E.—*Prosternum behind the coxæ smooth, not conically prominent, without margin. Mandibles short.* (Species 9–25.)

In some species of this group the apex of the prosternum is protuberant, but does not project backwards in a conical manner.

* *Humeral angles of elytra more or less acute.* (Species 9–14.)

9. **Temnochila chlorodia.**

Trogosita chlorodia, Mann. Bull. Mosc. 1843, pt. 2, p. 301[1]; Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 32[2].

Trogosita virescens, Reitter, loc. cit. p. 30[3] (nec Fabr.); Henshaw, List Col. Am. North of Mexico, p. 60[4].

Trogosita viridicyanea, Reitter, loc. cit. p. 29[5].

Hab. North America[1 2 3 4 5], from Central States to California, Lower California (*coll. Sharp*).—Mexico[2 5].

I have not seen any example of this species from our region; but as it occurs in Lower California, it may probably be detected in Northern Mexico. Not much reliance can be placed on Reitter's record of the species as Mexican.

The characters by which this may be distinguished from *T. præterita* will be found mentioned under that species.

This insect is named *T. virescens*, Fabr., in collections and by recent writers; but it can scarcely be the *T. virescens* of Fabricius's description; and I have therefore adopted a more recent name.

10. **Temnochila dryadis.**

Trogosita dryadis, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 30[1].

Hab. Mexico[1].

From the brief description, I infer that this is probably a colour-variation of *T. chlorodia*. It was described from a single female example.

11. **Temnochila præterita**, sp. n.

Subdepressa, læte viridis, nitida, antennis pedibusque nigricantibus; capite prothoraceque crebrius fortius punctatis; elytris minus fortiter sed evidenter punctatis, punctatura serierum interstitiarumque fere æqualibus; abdomine sat crebre fortiter punctato.

Long. 12 millim.

Mas, area submentali parce punctato, medio fasciculo parvo armata; abdomine segmentis 2°–4ᵐ tantum ad latera punctis adjectis parum numerosis.

Hab. Mexico, Las Vigas (*Höge*).

This species is extremely similar to the North-American *T. chlorodia*; but it may be distinguished by the less amount of difference between the punctuation of the interstices and those of the striæ, and by the anterior angles of the thorax being more acute, also the prosternal process has its hind margin more depressed and flatter. It is equally similar to the small varieties of *T. planipennis*, but it has the thorax scarcely at all angulate at the sides, and not abruptly narrowed in its basal part, the humeral angles of the elytra not rounded, and the antennæ not metallic in colour, even the basal joint being scarcely at all viridescent in front; the punctuation of the upper surface is considerably coarser than in any example I have seen of *T. planipennis*. I have seen only three examples of the species, but after comparison with a series of *T. chlorodia* I have no doubt the two are distinct.

12. **Temnochila fraudulenta,** sp. n.

Subdepressa, nitida, nigricans, supra læte viridis; capite prothoraceque fortiter crebrius punctatis; elytris seriatim fortiter punctatis, interstitiis fortiter sed subtilius punctatis; prosterno fere lævigato, pone coxas lato, plano, argute marginato.

Long. 12 millim.

Mas incog.

Hab. MEXICO, Bobo (*Höge*).

Excessively similar to *T. præterita*, from which it differs by the definite and distinct raised margin behind the broad prosternal process. I know no other species that resembles it in this respect, and have no doubt it will prove distinct, although we have received only one female example. It differs from the species near which I have placed it by the small size of the sensitive areæ on the joints of the antennal club, and agrees in this respect with *T. chlorodia*. The thorax is rather finely margined at the sides, not denticulate, the front angles slender and acute. The shoulders of the elytra are rather acute. The punctuation of the elytra is coarse, like that of the coarsely punctate varieties of *T. chlorodia*.

The species is, to some extent, an exception in this group, owing to the margin of the prosternal process: this margin is, however, different to what it is in the *T. quadricollis* group, where it has the appearance of being a separate piece connecting the apices of the epimera; whereas in *T. fraudulenta* it is merely a slender raised margin to the flat prosternal process.

13. **Temnochila planicollis,** sp. n.

Minus elongata, subdepressa, nigra, nitida, elytris fusco-violaceis; capite prothoraceque crebrius fortiusque punctatis; elytris seriatim sat fortiter punctatis, punctis serierum interstitiarumque subæqualibus, ante apicem paullo subtilioribus; prosterno inter coxas leviter impresso, post hoc convexiusculo, margine posteriore obsolete marginato; area submentali fortiter punctata.

Long. 10–13½ millim.

Mas, area submentali medio fasciculo sat magno armata; abdomine segmentis 2°–4^{m} ad latera punctis adjectis perpaucis.

Hab. GUATEMALA, San Gerónimo, San Joaquin, Balheu (*Champion*).

This appears to be very closely allied to *T. præterita*, though very different in colour; in addition to this the prosternum is somewhat differently formed, and the front angles of the thorax are more prominent, though, as the sides there are a little incurved, the angle itself is not more acute. The thorax is rather broad, and a good deal narrowed from behind the middle to the base. From *T. fraudulenta* this species is distinguished by the colour and by the prosternum behind the coxæ being less depressed and not so distinctly margined. In some specimens of *T. planicollis* this margin can only be detected at the hind angles of the prosternal process.

Mr. Champion obtained eleven examples of this species, all from the pine-woods of Vera Paz.

14. Temnochila virescens.

Lucanus virescens, Fabr. Syst. Ent., App. p. 817 [1].
Temnochila acuta, Leconte, Proc. Ac. Phil. 1858, p. 63 [2].
Trogosita mexicana, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 32 [3].
Trogosita metallica, Perch. Gen. Ins., fasc. iv. Col. t. 14 (nec Reitter) [4].
Temnochila metallica, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 435 [5].

Convexa, minus lata, subcylindrica, colore variabilis, sæpe virescens, nitidula, antennis nigris, articulo basali anterius virescente; prothorace transversim convexo, parce subtiliter punctato, ad latera lævigato, margine laterali fere subtili, angulis anterioribus rectis, haud productis; elytris subtiliter et parce seriatim punctatis, punctis interstitiarum serierumque fere æqualibus.

Long. 9–21 millim.

Mas, area submentali parce punctata, medio fasciculo sat late armata; abdomine segmentis 1°–4^m^ opacis, fere per totam latitudinem dense subtilissime punctatis, marginibus posterioribus impunctatis.

Fem., abdomine nitidulo, parce vix fortiter punctato.

Hab. North America, Texas [2].—Mexico [3 4 5], Las Vigas, Vera Cruz, Misantla, Salazar, Bobo, Jalapa, Tehuantepec (*Höge*); Cordova, Toxpam, Coapan, Mirador, Santecomapan, Playa Vicente (*Sallé*), Temax in North Yucatan (*Gaumer*); British Honduras, Belize, R. Sarstoon, R. Hondo (*Blancaneaux*); Guatemala, El Tumbador, El Reposo, San Isidro, Pantaleon, Mirandilla, Zapote, Capetillo, San Gerónimo, San Juan in Vera Paz, Chacoj (*Champion*); Nicaragua, Granada (*Sallé*), Chontales (*Belt*, *Janson*); Costa Rica (*Van Patten*), Caché (*Rogers*); Panama (*Sallé*), Volcan de Chiriqui (*Champion*).

Var. Nigra, subænescens, fortius punctata, elytrorum interstitiis obsolete subcostatis.

Hab. Mexico, Presidio de Mazatlan, Ventanas, Tres Marias Islands (*Forrer*).

Var. Angustior, violacea, prosterno processu post coxas late impresso.

Hab. Honduras, Ruatan Island (*Gaumer*).

Var.? Latior, minus cylindrica, viridi-cyanea, capite prothoraceque crebrius punctatis; capite fere ecanaliculato.

Hab. Mexico, Tres Marias Islands (*Forrer*).

Var.? Angustior, fere cylindrica, nigra, elytris multo fortius punctatis; capite fere ecanaliculato.

Hab. Mexico, Tacambaro and Huetamo in Michoacan (*Höge*).

This is a most variable insect in size and colour, and also, though to a less extent, in punctuation; in consequence it is very frequently wrongly named in collections, the smaller individuals being mixed with *T. chlorodia*, Mann., while the larger examples are separated under the name *T. mexicana*, Reitt. *T. virescens* may be, however, in all its variations separated from *T. chlorodia* by the larger size of the areæ of sensitive sculpture on the ninth and tenth joints of the antennæ, as well as by the peculiar sculpture of the ventral segments in the male sex. In addition to these characters, it may be added that *T. virescens* is a more cylindrical and convex insect than *T. chlorodia*, the thorax especially being more convex, and the lateral margin placed farther down on the sides.

The synonymy is very doubtful; and the more difficult to unravel from the fact that describers have not satisfactorily distinguished the two species, and may very probably have mixed them together. It seems clear, however, that the brief description of Fabricius[1] applies better to this species than it does to *T. chlorodia*; and his name being the older and being adopted for the species, the subsequent names are of comparatively little importance, and it is not worth while to discuss them at length at present. *T. acuta*, Lec.[2], is given amongst the synonyms on the authority of a pair sent under that name to the British Museum by Leconte himself.

The varieties from Tres Marias Islands and from Michoacan may possibly prove to be distinct; but I have only seen one specimen from the former and two from the latter locality, and the characters do not seem to be important with the exception of the obsolescence of the channel on the head.

T. virescens is the most central species of the genus, and in fact is a connecting link between the species of the division in which I have placed it, and the division with very fine thoracic margins, and not acute front angles to the thorax.

** *Humeral angles of elytra obtuse or rounded.* (Species 15–25.)

15. Temnochila planipennis.

Trogosita metallica, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 27 (nec Perch.)[1].
Temnochila planipennis, Léveillé, Bull. Soc. Ent. Fr. 1889, p. xliv[2].
? *Temnochila ærea*, Leconte, Proc. Ac. Phil. 1858, p. 63[3].

Subdepressa, læte viridis, sat nitida, antennis cyanescentibus, articulo basali viridi, clava brevi; capite prothoraceque minus fortiter punctatis, illo profunde canaliculato, hoc minus elongato, posterius angustato, margine laterali in medio sat conspicue impresso, angulis anterioribus porrectis; elytris tantum obsoletissime punctatis; area submentali parcissime punctata.

Long. 10–20 millim.

Mas, area submentali medio fasciculo tenui transverso munita; abdomine segmentis 1°–4^m^ ad latera punctis adjectis sat numerosis.

Hab. Mexico[1 2], Las Vigas, Toluca, Salazar, Misantla (*Höge*), Jacale (*Sallé*), Popocatepetl (*Godman*), Volcan Ixtaccihuatl 11,500 feet (*Richardson*).

We have received a large series of this species, which appears, however, to be local. The majority of our examples were found at Las Vigas by Höge; the specimens from this locality do not vary much except in size. The small series from Misantla are of a more brilliant and golden colour, are of large size, have the antennæ a little more slender and the hind margin of the prosternum a little thicker. The pair found by Mr. Godman in a pine-forest on Popocatepetl represent apparently a well-marked variety with more elongate thorax, which, too, is slightly depressed along the middle; they are unfortunately in a very bad state of preservation.

The series of six specimens from Jacale contains two very remarkable varieties, the other four being quite normal: one of these varieties apparently agrees with the pair

from Popocatepetl mentioned above, while the other is of very large size, 20 millim. long, and has the channel on the head subobsolete. I think it possible that these varieties may prove to be distinct, though in that case very closely allied, species; but we have not received enough specimens of them to decide this point, and it appears more probable that they are only local varieties.

T. planipennis is one of the species in which the sensitive areæ on the club of the antennæ are most reduced in size. I have not seen any example of it from North America; but Leconte's description [3] of *T. ærea*, from San Francisco, California, seems to apply to this species or to one closely allied.

This insect is named *T. metallica*, Perch., in collections; but Léveillé [2] has recently informed us from an examination of Percheron's type that this is erroneous, and has proposed for the species the name I have adopted.

16. **Temnochila obsoleta.**

Trogosita obsoleta, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 28 [1].

Hab. Mexico [1].

Reitter places this insect next to *T. planipennis* (*metallica*, Reitt.), but I suspect it will prove to belong to one of the varieties of *T. virescens*.

17. **Temnochila miranda,** sp. n. (Tab. XIII. fig. 7.)

T. planipennis proxime affinis; subdepressa, læte viridis, elytris externe rubro-cupreo fulgidis, ad suturam viridescentibus, capitis canalicula valde abbreviata.

Long. 17–21 millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Whether this beautiful insect proves to be a distinct species or only a race of *T. planipennis*, it deserves a special name. In addition to the colour and the much abbreviated channel on the head, it has the hind-margin of the prosternum thicker than in any specimens I have examined of *T. planipennis*. The sexual characters seem to be the same as in that common species.

Mr. H. H. Smith found a series of ten specimens in the months of July and August; one of them is a remarkable aberration in that it has no channel at all on the head.

18. **Temnochila urbensis,** sp. n.

Subdepressa, fere opaca, nigro-subviolacea; capite prothoraceque crebre punctatis, illo obsolete canaliculato (♂) vel ecanaliculato (♀), hoc posterius angustato, margine laterali in medio obsolete impresso, angulis anterioribus porrectis; elytris obsolete punctatis; area submentali parcissime punctata.

Long. 12–16 millim.

Hab. Mexico (*ex coll. Sturm*), near the city at an elevation of 8000 feet (*Forrer*).

I separate this insect from *T. planipennis* on account of the different canaliculation of the head, the less impressed sides of the thorax, and the peculiar colour but it

may possibly prove to be only a race of that species. The sexual characters of the under surface appear to be much the same as those of *T. planipennis*.

Forrer has sent three individuals. The specimen from Sturm's cabinet is labelled "*T. anthracina*," Sturm; but I have not preserved this name, as the violet colour is well marked in the other specimens.

19. **Temnochila alticola**, sp. n.

Subdepressa, sat nitida, cyanea, antennis nigris; capite prothoraceque crebre minus fortiter punctatis, illo anterius subtiliter canaliculato, hoc basin versus fortiter angustato, margine laterali crasso, in medio sinuato; elytris subrugosis, seriebus et interstitiis æqualiter parum fortiter punctatis.

Mas, area submentali medio subprominulo et punctata, fasciculo parvo, arcuato.

Long. 19–20 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

This is another species very closely allied to *T. planipennis*; but, although we have only received one pair, I have no doubt it is distinct, as the sensitive areæ on the antennæ are more extensive and the hind-margin of the prosternum is thicker. These characters, combined with the darker colour and more distinct punctuation, will enable it to be identified. The male has scarcely any additional fine punctuation at the sides of the ventral plates, so that in this respect it would be passed as a female.

Found in pine-woods, like many other species of the genus.

20. **Temnochila grandis**, sp. n.

Major, lata, sat nitida, nigro-viridis, supra cyanescens, antennis nigris, articulo basali anterius cyanescente; capite prothoraceque sat crebre minus fortiter punctatis, hoc margine laterali sat crasso; elytris humeris omnino rotundatis, opacis, seriebus internis externisque punctorum omnino obsoletis, seriebus intermediis fortis, sed haud striatis, interstitiis fere impunctatis.

Long. 23 millim.

Mas incog.

Hab. GUATEMALA (*Mus. Brit.*).

Considerably larger than any individual of *T. planipennis*, and distinguished from all the varieties of that species by the antennæ being more elongate, and by the three intermediate series of punctures on the elytra being much more conspicuous than the three sutural or the three external series. The head is deeply canaliculate in front. The sinuation at the sides of the thorax is but slight, and though there is a large impression on each side there is no trace of any denticulation. The prosternum is like that of *T. planipennis*, except that the posterior aspect of the prosternal process is much thicker.

I have seen only the single specimen in the National Collection; it was obtained from the collection of the late G. R. Waterhouse, and is the largest *Temnochila* as yet known from our region.

21. **Temnochila exarata,** sp. n.

Sat convexa, cyaneo-nigra, supra cyanea, antennis nigris, articulo basali anterius cyanescente; capite prothoraceque crebre sat fortiter punctatis, hoc lato, basin versus fortiter angustato, margine laterali crasso; elytra ad suturam subtiliter seriatim punctatis, inter suturam et marginem lateralem striis circiter tribus profunde impressis.

Long. 14–18 millim.

Mas incog.

Hab. Mexico (*Sallé*), Jalapa (*Höge*).

This species is distinguished by the deep striation on the middle of each elytron, the sutural series of punctures being quite fine and the external series quite obsolete. The thorax has a large impression on each side close to the lateral margin, but this latter is not at all denticulate. The species therefore is only closely allied to *T. grandis*. The punctuation of the ventral segments is coarse but not dense.

We have received only two examples of *T. exarata*; they are both females and possess an extremely indistinct though rather large depression or deplanation along the middle of the last ventral segment. *T. olivacea*, Reitter, from Bogota, may perhaps be allied to it, but the description differs in many details from our insect.

22. **Temnochila sulcifrons,** sp. n. (Tab. XIII. fig. 8.)

Nigro-ænea, supra ænescens vel cyanescens, antennis nigris, clava gracili; capite fere angusto, crebrius fortiusque punctato, oculis haud omnino depressis; prothorace basin versus fortius angustato, crebrius sat fortiter punctato, medio longitudinaliter leviter impresso, margine laterali crassiusculo, medio impresso et sinuato; elytris seriebus et interstitiis perspicue fere æqualiter punctatis; abdomine fortiter punctato.

Long. 12–15 millim.

Mas, area submentali medio pubescente fasciculoque armata; abdomine segmentis 1°–4^{m} ad latera punctis adjectis parum numerosis.

Fem., abdomine segmento ultimo ventrali in medio ad apicem leviter oblique deplanato.

Hab. Mexico, Chiapas (*Sallé*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Capetillo, Calderas, Volcan de Agua 8500 to 10,500 feet (*Champion*).

The very deep channel on the head, the coarse punctuation of this part, its rather narrower form, and the slightly more convex eyes are the most evident peculiarities of this species; the sensitive areæ on the antennæ are large; and the prosternum behind the coxæ is a little thicker than in any of the preceding species. Sixteen examples.

23. **Temnochila derasa,** sp. n.

T. sulcifrontis proxime affinis; violacea, supra parum nitida, elytris omnino obsolete punctatis; capite minus dense, anterius subtiliter posterius fortiter, punctato; prothorace basin versus fortiter angustato, crebre parum fortiter punctato, medio longitudinaliter late impresso, margine laterali crassiusculo, pone medium denticulato; abdomine parce minus fortiter punctato.

Long. 13 millim.

Mas, area submentali medio fasciculo parvo armata; abdomine segmentis 1°–4^{m} ad latera punctis perpaucis adjectis.

Fem., abdomine segmento ultimo ventrali simplice.

Hab. Mexico, Parada (*Sallé*), Las Vigas (*Höge*).

Although very closely allied to *T. sulcifrons*, the distinctions that will be gathered from the above diagnosis seem to me indicative of another species, of which, however, we have received only three examples; one of them—the only male—is an aberration in which the pigmentary matter is deficient, leaving the ground-colour reddish instead of black. This sort of deficiency occurs in other species of the genus.

24. **Temnochila smithi**, sp. n. (Tab. XIII. fig. 9.)

Subdepressa, nigro-viridis, supra viridi-aurata, antennis nigris; capite posterius fortiter, sat crebre, anterius subtilius punctato; prothorace medio longitudinaliter late depresso, basin versus fortiter angustato, margine laterali crasso, in medio sinuato-depresso et denticulato, sat crebre minus fortiter punctato; elytris sat nitidis, sublævigatis; abdomine parce minus fortiter punctato; area submentali lævigata.

Long. 14–20 millim.

Mas, area submentali medio fasciculo sat magno armata; abdomine segmentis 1°–4^{m} ad latera punctis adjectis parum numerosis.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Mochitlan in Guerrero (*Baron*), Yolotepec (*Sallé*).

This species is closely allied to *T. sulcifrons* and *T. derasa*; but is distinguished by the deeper and broader depression along the thorax, the almost polished elytra, and the golden tint of the upper surface, and by the prosternum being more prominent behind the coxæ. Although this latter character brings it somewhat near to the species of the next group (*T. polita* &c.), yet the shape of the thorax with its thick lateral margins is quite the same as we find characteristic of *T. planipennis* and its allies; the channel on the head is very deeply impressed, as in *T. sulcifrons*.

Mr. H. H. Smith secured a series of about twenty examples of this elegant insect in July and August 1888; the single example from Yolotepec is a variety with the surface comparatively dull.

25. **Temnochila diffinis**, sp. n.

Nigro-viridis, supra ænea, antennis nigricantibus; capite prothoraceque crebrius fere subtiliter punctatis, illo anterius minus profunde canaliculato; elytris seriatim subtilius remote punctatis; prosterno pone coxas prominulo sed haud conico-elevato.

Long. 13 millim.

Mas incog.

Fem., segmentis ventralibus sat crebre et fortiter punctatis, segmento ultimo inimpresso.

Hab. Mexico, Jalapa (*Höge*, *M. Trujillo*), Bobo (*Höge*); Guatemala, Panajachel 5000 feet (*Champion*).

Head moderately broad, moderately closely and finely punctate. Thorax somewhat rounded at the sides in front, with a rather deep impression close to the side-margin behind the middle; behind this a good deal narrowed towards the base; lateral margin not very coarse, the front angles but little produced; the punctuation fine. Elytra quite finely and remotely punctate. Prosternum moderately finely, sparingly punctate.

This species is difficult to place, being to a certain extent intermediate between very different species; by the form of the prosternum, which is without any trace of margin behind, it is nearest to *T. smithi*, though very different therefrom in other respects.

Group F.—*Apex of prosternum conically protuberant, polished.* (Species 26–31.)

26. **Temnochila polita.**

Trogosita polita, Chevr. Col. Mex. Cent. i. no. 66[1].

Ænea, nitida, antennis pedibusque nigris; capite fortiter punctato; prothorace medio longitudinaliter depresso, depressione in medio punctata.
Long. 11–17 millim.
Mas, area submentali medio fasciculo parvo instructa; abdomine segmentis 1°–4^m^ ad latera subtiliter punctatis.
Fem., area submentali abdomineque lævigatis.

Hab. Mexico[1], Toxpam, Cordova (*Sallé*), Bobo (*Höge*); British Honduras, R. Sarstoon (*Blancaneaux*); Guatemala, Las Mercedes, Cerro Zunil, Zapote, Capetillo, Panima, Sabo, San Juan in Vera Paz (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

This species differs from all its allies in having the thoracic depression furnished along the middle with coarse punctures. Mr. Champion found nearly three dozen examples in Guatemala, and a single specimen in the State of Panama; this latter does not differ in any respect from Mexican exponents. The species, however, varies a good deal in minor characters, and also in the development of the fascicle on the submentum of the male.

27. **Temnochila querula,** sp. n.

Ænea, nitida, antennis pedibusque nigris; capite subopaco, obsolete punctato, oculis subprominulis; prothorace medio longitudinaliter depresso, depressione lævigata, margine basali subtili.
Long. 13 millim.

Hab. Guatemala, Purula, Capetillo (*Champion*).

I have before me seven examples that I refer to this species; they are well distinguished from *T. polita* by the less punctate head, with more prominent eyes, the fine basal margin of the thorax, and the impunctate longitudinal impression on this latter part. I am not equally sure, however, that all the seven individuals belong to the same species, as I fail to distinguish the sexes satisfactorily: in none of the individuals is there any fascicle on the middle of the submentum, though some of them have a few fine punctures on this part, while in the others it is quite smooth; also in some of the specimens there is a coarse punctuation extending across the penultimate ventral segments, which in other examples is less distinct. I am inclined to think that they will prove to belong to one species, in which the usual sexual distinctions are nearly absent and the punctuation of the ventral segments is at the same time more variable than

usual; but it is possible that they may be the females of two different species. The head is rather narrow, and the frontal channel is very deep; there are no coarse punctures across the upper part. The thoracic channel is very marked, and is entirely free from any punctuation, while the rest of the surface of the thorax is more or less feebly punctured. There is no punctuation at the apices of the elytra, but the depression on each side of the sutural elevation is well-marked and elongate.

28. **Temnochila boboensis,** sp. n.

Ænea, subtus æneo-subcyanea, antennis pedibusque nigricantibus; capite prothoraceque minus nitidis, illo fortiter punctato, hoc crebre punctato, medio vage longitudinaliter impresso, margine basali subtili; abdomine segmentis 2°–4^{m} medio fortiter punctatis.

Long. 10–14 millim.

Mas, area submentali medio fasciculo lato instructa; abdomine segmentis 1°–4^{m} ad latera punctis minutis adjectis numerosis.

Hab. Mexico, Bobo, Jalapa, Misantla (*Höge*).

Distinguished from the other species of the group by the hind portion of the terminal ventral plate being markedly perpendicular; this peculiarity (which is also seen in *T. chalcea* and its allies in the preceding group) is more largely developed in the female than it is in the male, and in the former sex it is more or less prolonged forwards in the middle, so as to give the appearance of a small depression in the middle of the hind edge of the segment. The punctulate thorax, and the fact that the impressions at the apices of the elytra are less marked than in the allies, will, in addition to the abdominal structure, permit of the identification of the species with ease. We have received ten examples of *T. boboensis.*

29. **Temnochila reversa,** sp. n.

Supra ænea, nitida, prothorace marginibus virescenti-micantibus, antennis nigris, articulo basali, pedibus corporeque subtus virescenti-cyanibus; capite fortiter punctato; prothorace basin versus fortiter angustato, margine basali subtili, parce punctato, medio tantum obsolete longitudinaliter impresso; abdomine parce punctato.

Long. 14 millim.

Mas, area submentali medio punctata, fasciculo transverso munita; abdomine segmentis 1°–4^{m} ad latera punctis adjectis numerosis.

Fem., area submentali fere lævigata.

Hab. Mexico, Toxpam, Tuxtla (*Sallé*).

T. reversa is not very similar to any other species of this group, owing to the thorax being more narrowed behind; this character, in addition to the elegant colour of the under surface and the very obsolete impression along the middle of the thorax, will prevent its being confounded with *T. polita,* which, moreover, has a broad basal margin to the thorax. There is no punctuation at the apex of the elytra.

Only two specimens of the species have been received; the female has the last ventral plate quite flat, with the fine margin at its hind edge distinct, but in the male

there is a short reflexed apical portion on which the margin is placed, so that this is concealed until the segment is bent away from the elytra.

T. reversa is similar in many respects to *T. smithi*, and were it not for the well-marked protuberance of the prosternal process would be better placed near to it.

30. **Temnochila championi,** sp. n. (Tab. XIII. fig. 10.)

Supra ænea, nitida, antennis nigris, articulo basali, pedibus corporeque subtus cyanescentibus; capite fortiter punctato; prothorace parce punctato, margine basali medio crassiusculo; elytris apicibus parce punctatis; abdomine medio fere lævigato.

Long. 13–20 millim.

Mas, area submentali medio fasciculo minuto instructa; abdomine ad latera parce subtiliter punctato.

Fem., abdomine fere lævigato.

Hab. NICARAGUA, Chontales (*Janson*); COSTA RICA (*Van Patten*); PANAMA, Bugaba, Volcan de Chiriqui, Caldera (*Champion*).

The thorax is rather elongate and parallel-sided, with lateral marginal sinuation well-marked and the front angles prominent; there is no trace of any depression on the disc, but there is a more or less feeble flattening of the surface at the base in the middle. The elytra are polished and shining, but there are always distinct punctures at the apices. In the female the margin of the last ventral plate is distinct, and even in the male it is but little concealed, the thickening of the hind edge being extremely slight.

Mr. Champion procured a very fine series of this species in the State of Panama, but from Chontales we have received only two specimens, and from Costa Rica only one example; the species varies but little except in size.

A single female from the Volcan de Chiriqui has a very distinct punctuation on the ventral segments, and may perhaps prove to belong to an undescribed species. The unique exponent from Costa Rica has a highly polished surface, and its colour is slightly different.

31. **Temnochila costaricensis,** sp. n.

Fem. supra ænea, nitida, antennis pedibusque nigris, corpore subtus æneo-subviridescente; capite fortiter punctato; prothorace nitido, parcius subtiliusque punctato, ad basin in medio depresso, margine basali subtili; elytris impunctatis, politis; abdomine parcius irregulariter punctato.

Long. 19 millim.

Hab. COSTA RICA, Volcan de Irazu (*Rogers*).

We have received only two examples of this insect, both of the female sex. Although at first sight they are excessively similar to *T. championi*, I entertain but little doubt of their being distinct; the basal margin of the thorax shows no trace of the incrassation that is seen in the middle of its course in *T. championi*, and there is no punctuation at the apices of the elytra; the colour of the under surface is scarcely blue, differing

comparatively little from that of the upper surface, and there is a very scanty irregularly distributed punctuation to be seen on the ventral segments.

A single female from Bugaba may perhaps be an extreme variety of *T. costaricensis*; but it has the thorax almost destitute of punctuation, while on the ventral segments there is a very distinct punctuation extending all across each plate except the basal one.

Group G.—*Prothorax with the lateral margins fine, the front angles not at all produced.* (Species 32–43.)

32. **Temnochila iris.**

Trogosita iris, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 42 [1].

Elongata, angustula, læte viridis, nitida, elytris singulo vitta longitudinali, elongata, purpurea, antennis nigris, pedibus rufis; capite crebrius fortiter punctato, anterius obsolete sulcato; abdomine parce sat fortiter punctato.

Long. 9–12 millim.

Mas, area submentali medio fasciculo brevi, sat late instructa.

Hab. Mexico [1], Cordova (*Sallé*); Guatemala, Volcan de Atitlan (*Champion*); Costa Rica, Caché (*Rogers*).

The hinder portion of the last ventral segment is red in all the four examples we have received of this species. It is the only one found in our region in which there is an elongate simple purple vitta on each wing-case.

33. **Temnochila sallæi.**

Temnochila sallei, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 416 [1].

Parallela, minus elongata, læte viridis, prothorace longitudinaliter vage purpureo-signato, elytris plaga magna basali, fascia angulata post medium suturaque posterius purpurascentibus, pedibus rufis, tarsis piceis; capite crebrius punctato, anterius sulcato, disco purpurascente, antennis brevibus, nigris, articulo basali rufo, ad apicem viridescente; abdomine parce punctato.

Long. $7\frac{1}{2}$–10 millim.

Mas, area submentali medio fasciculo late instructa; abdominis segmentis ad latera paullo crebrius punctatis.

Hab. Mexico, Yucatan [1]; Guatemala, Volcan de Atitlan 2500 to 3500 feet, Pantaleon (*Champion*).

Var. Colore obscure viridi, capite latius purpurascente.

Hab. Mexico, Temax in North Yucatan (*Gaumer*).

M. Léveillé has identified one of our specimens of this species. We have received only four examples of it, all of which have the basal joint of the antennæ red, tipped with green in front, though it is described as metallic green by the French savant. The variety from Yucatan, though much more obscure in colour, probably belongs to the same species, though we have received only one specimen of it.

34. **Temnochila grouvellei.**

Temnochila grouvellei, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 415 [1].

Minus elongata, parallela, nitida, læte viridis, capite disco, prothorace late ad marginem anteriorem, elytra plaga magna basali, fascia post medium suturaque versus apicem purpurascentibus ; pedibus rufis, femoribus ad apicem tibiisque viridi-micantibus, tarsis piceis ; capite crebre punctato, anterius sat profunde sulcato ; antennis brevibus, nigris, articulo basali anterius viridescente.

Long. 8–11 millim.

Mas, area submentali medio punctulata, setigera ; abdomine segmentis ad latera crebrius punctatis.

Hab. Panama, Bugaba (*Champion*), Chiriqui [1].

In this species the purple coloration of the thorax is placed quite at the front margin. We have received twelve examples, and they exhibit but little variation. This has also been determined for us by its describer M. Léveillé : our specimens agree with his description, except that the legs are more extensively red, and that the transverse impression which he mentions as existing near the front of the thorax cannot always be detected.

35. **Temnochila chiriquensis,** sp. n. (Tab. XIII. fig. 11.)

Minus depressa et elongata, parallela, nitida, læte viridis, capite disco, prothorace signaturis angulatis in medio, elytris plaga magna basali, fascia post medium suturaque ad apicem purpurascentibus, pedibus nigro-viridibus ; capite sat crebre punctato, anterius canaliculato ; antennis nigris, articulo basali metallescente.

Long. $7\frac{1}{2}$–11 millim.

Mas, area submentali medio parum setigera ; abdomine segmentis crebre punctatis.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Very closely allied to *T. grouvellei*, but as we have received a series of thirteen examples without an intermediate form, I treat it as distinct. The coloration of the thorax is different : there is on each side an angular mark extending from the front angle backwards and inwards, and connecting with the angle of a rhomboidal mark placed on the disc. The purple colour at the apex of the elytra is dilated, and extends a little outwards along the apical margin, whereas in *T. grouvellei* it becomes pointed behind and scarcely reaches the apex itself. The legs, too, are darker in colour. The insect is of rather more convex form than *T. grouvellei*. There is no transverse depression on the thorax ; but in some examples there is a very feeble foveiform depression of the surface on each side. The lateral margin of the thorax is very fine in front, and scarcely visible from above ; the lateral denticulation behind the middle is but slight.

In addition to the Chiriqui examples, we have received from Caché, Costa Rica (*Rogers*), a single specimen of a variety of very small size, in which the lateral apical extension of the purple sutural stripe is scarcely perceptible.

36. **Temnochila telemanensis,** sp. n.

Minus depressa et elongata, parallela, nitida, viridi-ænea, capite, prothorace anterius elytrisque versus apicem

purpureo-nitidis; pedibus rufis, tibiis obscurioribus, tarsis nigricantibus; abdomine apicem versus rufo; antennis brevibus, nigris; capite ecanaliculato.

Long. 10 millim.

Hab. GUATEMALA, Teleman in Vera Paz (*Champion*).

Similar in size and form to *T. chiriquensis*, but of different colour, and without a channel on the head. The antennæ are black, short. The head is very shining and in larger part of a purple colour, its punctuation only moderately fine and close. The thorax is brilliant, greenish, tinged with purple in a vague manner, especially in front; its punctuation is similar to that of the head; the front angles are rectangular, and the margin exists only a little way inwards from the side-margin; the lateral impression is feeble. The elytra are very shining, finely and sparingly punctate, with a few irregular strigosities or scratches between the punctures; the colour is green and purple like that of the head and thorax, the former colour predominating in front, the latter behind. The femora are red, the tibiæ blackish-red, the tarsi nearly black. The posterior ventral segments are red. The prosternum is rather coarsely punctate. The male has a large setigerous area and much punctuation on the submentum, and a rather fine, moderately close, and evenly-distributed punctuation on the ventral segments.

One specimen.

37. **Temnochila stipes,** sp. n.

Minus depressa et elongata, parallela, supra nigro-ænea, subtus nigra, nitida; capite haud canaliculato, crebrius punctato.

Long. 10 millim.

Hab. MEXICO, Acapulco in Guerrero (*Höge*).

Antennæ short, black. Head broad and short, coarsely and rather closely punctured. Thorax with the front angles rounded and the margin continued inwards nearly half-way to the middle, the lateral margin almost completely destitute of impression and denticulation, the surface rather coarsely punctured, the hind angles almost rectangular. Elytra rather coarsely punctate and with well-marked strigosities. Legs black. Male with a minute pencil of hairs on the submentum and a scanty punctuation on the ventral segments; female almost destitute of punctures on the last-named part.

Two specimens.

This species is only likely to be confused with *T. corynthia*, from which it differs by the unchannelled head, the greater length of the front margin of the thorax, the less punctate ventral plates, and the quite black legs.

38. **Temnochila corynthia.**

Trogosita corynthia, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 33[1].

Sat elongata, angustula, minus depressa, parallela, nitida, ænea, femoribus æneo-rufis; capite anterius breviter canaliculato.

Long. 8–13 millim.

Hab. MEXICO [1], Cordova, Playa Vicente, Orizaba (*Sallé*), Bobo, Las Vigas (*Höge*).

Reitter described this species on a single example of the female sex in Chevrolat's collection. The male has a small fascicle on the submentum, and a rather numerous fine punctuation on the ventral plates. The species appears to occur only in one or two examples at a time and to be rather variable. The anterior thoracic margin can be detected only quite at the side. One example has the elytra deeply corrugate: M. Léveillé tells me he has seen other individuals of different species of *Temnochila* in this condition. It is certainly a very remarkable aberration, the elytra being otherwise well developed.

39. **Temnochila aureola.**

Trogosita aureola, Reitter, Verh. Ver. Brünn, xiii., Abhandl., p. 38 [1].

Hab. MEXICO [1].

From Reitter's description this appears to be very similar to *T. corynthia,* but the male has the posterior tibiæ dilated at the extremity. We have not received an example of any *Temnochila* possessing this character.

40. **Temnochila suturata.**

Trogosita suturata, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 39 [1].

Hab. MEXICO [1].—SOUTH AMERICA, Brazil [1].

This insect is green above, with a narrow stripe of purple colour along the suture and lateral margins of the elytra. M. Léveillé has been kind enough to send me an example from Minas Geraes for inspection. The form of the insect is similar to that of *T. corynthia,* but the club of the antenna is different. We have not received anything at all similar in this respect, and in some other of the characters Reitter assigns to the species. I look upon the locality "Mexico" as very doubtful.

41. **Temnochila laticollis.**

Trogosita laticollis, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 39 [1].

Hab. MEXICO [1].

We have not received anything that possesses the characters assigned to this species.

42. **Temnochila festiva.**

Trogossita festiva, Serville, Encycl. Méth. x. p. 719 [1].

Trogosita festiva, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 41 [2].

Hab. MEXICO [2].—SOUTH AMERICA, Brazil [1 2].

It is very doubtful whether this insect has really been found in our region.

43. **Temnochila belti,** sp. n.

Fulgida, viridi-aurata, capite prothoraceque medio longitudinaliter purpureo-vittatis, elytris ad medium purpureo-fasciatis ; tibiis, tarsis antennisque rufis, his articulo basali anterius metallescente.

Long. 14 millim.

Mas, area submentali medio fasciculo sat late armata ; abdomine segmentis 1°–4^{m} fere dense punctatis.

Hab. NICARAGUA, Chontales (*Belt, Janson*).

This brilliant insect cannot be confounded with any other of our region ; the colour of the surface, of the legs, and of the antennæ being sufficient to distinguish it with certainty. The antennæ, except the basal joint, are clear red, rather elongate, with elongate club. The head has a short, rather fine channel in front, and is very sparingly and finely punctate on the vertex, but in front of this more coarsely and closely, a broad purple stripe extends along the middle. The thorax is very shining, very sparingly punctured, and has a broad purple stripe along the middle continuous with that on the head ; it is rather elongate and narrow, not at all broader in front; the lateral margin is very fine and placed far down at the side. The elytra are almost impunctate, in front golden-green, at the extremity more of a golden-copper colour, with a purple band across the middle.

We have received only two specimens of this brilliant insect, but I have seen others from the same locality in the collection of Mr. Geo. Lewis. It is not at all near any other species, and structurally appears almost as much allied to *T. virescens* as it does to its neighbours in this group.

TEMNOCHILODES.

Temnochilodes, Léveillé, Bull. Soc. Ent. Fr. 1890, p. clxxxiii.

This genus has quite recently been proposed for a single species from our region. We have not received an example of it.

1. **Temnochilodes dugesi.**

Temnochilodes dugesi, Léveillé, loc. cit. [1].

Hab. MEXICO, Morelia (*Dugès*).

EUPYCNUS, gen. nov.

Sulci antennarii latissimi, paralleli. Tibiæ latæ, extus spinulosæ.

I propose this genus for an insect resembling some of the elongate, oblong species of *Tenebroides.* It is well distinguished by the peculiar antennary grooves on the underside of the head: these are very broad, and instead of being convergent behind are parallel; the margin that limits them internally is behind curved outwards and passes behind the eye. The eye is finely faceted, and prolonged inwards on the under

surface of the head in an angular manner. The tibiæ are broad, and all of them are armed with a few short spinules on the outer margin. The front coxæ are rather short, and a wide space exists between their external end and the side of the thorax; the front angles of the prosternal flanks are greatly produced. The other characters are those of *Tenebroides*.

1. **Eupycnus lentus,** sp. n. (Tab. XIII. figg. 12; 12 *a*, underside of head.)

Elongatus, parallelus, parum depressus, niger, antennis rufis, elytris cyaneis; fortiter punctatus, elytris striatis, interstitiis biseriatim punctatis.
Long. $7\frac{1}{2}$ millim.

Hab. Mexico, Tacambaro in Michoacan, Jalapa (*Höge*).

Antennæ red, very thick, with broad club, the joints of which are adpressed, the sensitive areæ very small. Head rather narrow, moderately coarsely and closely punctured; epistome feebly emarginate in the middle, but without any projection. Thorax quadrate, nearly straight at the sides, a little narrowed behind; the surface rather coarsely punctate; the base truncate, the basal margin very distinct throughout, the lateral margin rather fine, the front angles much produced, but broad and not acute, the front with a raised margin extending from the angle to a considerable distance towards the middle. Elytra parallel, finely striate, the striæ viewed externally appearing feebly costate, the interstices with fine transverse rugæ and distinct biserial interstitial punctuation. Under surface shining, coarsely punctate.

This insect has somewhat the appearance of *Pycnomerus*, a genus of Colydiidæ. Only two examples have been obtained.

TENEBROIDES.

Tenebroides, Piller & Mitterpacher, Iter per Poseg. p. 87, t. 9. f. 9 (1783).
Trogossita, Olivier, Ent. ii. no. 19, p. 5 (1790).
Tenebrioides, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 65 (1874).

This is an extensive genus of about 100 species, nearly all of which are inhabitants of the New World; the few exceptions are that two or three species are found in the Polynesian islands, two or three in the Atlantic islands of Madeira and Teneriffe, while a single species has been recently described as a native of Barbary and Corsica, and another species is nearly cosmopolitan, having probably been distributed as a result of commercial intercourse.

The genus is widely known in Coleopterological literature under the name of *Trogosita*; but an older name has, however, been recently discovered for it, and Reitter and Léveillé having decided to use this, I follow them with hesitation and regret.

The species of *Tenebroides* are probably all carnivorous in their habits, and when met

with only a small number of examples can be procured; hence the majority of the members of the genus have been described from a very limited series of specimens—frequently, indeed, from uniques,—and very little information exists as to the variation of the species. In the collections amassed for the purposes of this work only one species of *Tenebroides*—in addition to the widely distributed *T. mauritanicus*—is represented by as many as twenty examples, while the great majority are illustrated by a very much smaller number of specimens.

The only character that has been found for separating the genus into two divisions is that used by Reitter and here adopted.

Division A.—*Basal line of the prothorax present on each side, but absent in the middle.* (Species 1–17.)

Group 1.—*Prothorax strongly transverse.* (Species 1–13.)

1. Tenebroides mauritanicus.

Tenebrio mauritanicus, Linn. Syst. Nat. 10th ed. i. p. 417 (1758).

Hab. Fere ubique.—NORTH AMERICA.—MEXICO, Minas Viejas, San Pedro in Coahuila (*Dr. Palmer*), Pinos Altos in Chihuahua (*Buchan-Hepburn*), Zapotlan, Colima city (*Höge*), Omilteme in Guerrero (*H. H. Smith*), Guanajuato, Cordova, Teapa (*Sallé*); GUATEMALA, Yzabal (*Sallé*); NICARAGUA (*Sallé*).

2. Tenebroides depressus.

Trogossita depressa, Guér. Icon. Règne Anim. iii. p. 201 [1].
Tenebrioides depressa, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 72 [2].

Hab. MEXICO, Chinantla, Orizaba, Playa Vicente (*Sallé*); GUATEMALA, El Tumbador, Pantaleon (*Champion*), Escuintla (*Conradt*).—VENEZUELA, Caracas [2]; BRAZIL [1 2].

Distinct from all our other species of this group by its large size; it has, too, a fovea on the middle of the head, the sculpture of the submental area excessively coarse, and the terminal joint of the antennæ longer than usual. Twelve specimens.

3. Tenebroides breviusculus.

Tenebrioides breviuscula, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 72 [1].

Latus, depressus, subnitidus, nigro-piceus, elytris piceis, antennis pedibusque rufis; capite prothoraceque subtiliter punctatis, hoc fortiter transverso; elytris seriatim sat fortiter punctatis.
Long. $8\frac{1}{2}$, lat. $3\frac{1}{8}$ millim.

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*); GUATEMALA, Pantaleon, Mirandilla, Capetillo (*Champion*).—SOUTH America, Brazil [1].

Head broad and short, opaque, finely punctate, without fovea. Thorax very short,

rounded at the sides and narrowed behind ; hind angles very slightly prominent, obtuse ; the surface dull, as if greasy, finely punctured. Elytra short, without distinct striation, but with very distinct series of punctures, the interstices not quite flat, their serial punctuation very indistinct. Eyes very coarsely faceted. The submental area and margin very finely punctate. Prosternum impunctate. Eight examples.

An obscure species, without any salient characters. The Mexican examples differ slightly in punctuation from the three individuals found in Guatemala. M. Léveillé assures me that our insect is really referable to *T. breviusculus*, though I quite failed to detect this from Reitter's tables.

4. **Tenebroides celatus,** sp. n. (Tab. XIII. fig. 13.)

Piceus, depressus, sat elongatus, nitidus, capite opaco, antennis pedibusque rufis ; capite prothoraceque subtiliter punctatis, hoc fortiter transverso ; elytris seriatim sat fortiter punctatis.
Long. 10, lat. $3\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*) ; GUATEMALA, Las Mercedes, Mirandilla (*Champion*) ; NICARAGUA, Chontales (*Janson*).

This is very closely allied to *T. breviusculus* ; but is a more elongate insect, with a shining thorax, which has the sides behind the middle more parallel and the raised margin more coarsely sculptured externally. The eyes are unusually large and coarsely faceted, and have a greater extension on the upper surface of the head than they have in *T. breviusculus*. Five specimens.

5. **Tenebroides subplanus.**

Tenebrioides subplana, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 70[1].

Hab. MEXICO [1].

The only species we have received examples of that would at all nearly answer to Reitter's description is *T. celatus*. But *T. subplanus* is said to be black, to have the lateral serial punctuation of the elytra not visible, and the interstices almost subcostate —characters which do not at all apply to *T. celatus*.

6. **Tenebroides sonorensis,** sp. n. (Tab. XIII. fig. 14, ♀ .)

Latus, depressus, nitidus, fortiter punctatus, piceus, antennis pedibusque rufis ; prothorace brevi, basin versus fortiter angustato, sinuato ; elytris striato-punctatis, striis ad apicem obsoletis, interstitiis argute biseriatim punctatis.
Long. $7\frac{1}{2}$ millim.

Hab. MEXICO, Northern Sonora (*Morrison*).

Antennæ slender, the club long, the prominent lobes of the club small and much separated. Head broad, coarsely punctate, shining, almost unimpressed. Eyes small. Thorax very short, the anterior angles large, acute, much produced, the lateral margin

rather fine; much narrowed and distinctly sinuate behind, coarsely and numerously punctate, shining. Elytra with regular series of punctures placed on obscure striæ, the broad interstices distinctly and regularly biseriately punctate. Prosternal process broad and flat, finely punctate. Ventral segments moderately finely and remotely punctate; in the male with much finer and denser punctuation extending over a large part of each segment. Three specimens.

This species resembles *T. mauritanicus*, but is broader and more coarsely punctate, and the joints of the antennæ preceding the club are not at all incrassate.

7. Tenebroides ruber.

Tenebrioides rubra, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 73 [1].

Valde depressus, rufo-ferrugineus, politus; elytris obsolete striatis.
Long. 6½ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*); NICARAGUA, Chontales (*Janson*).—SOUTH AMERICA, Brazil [1].

Antennæ with rather large club. Head somewhat prolonged in front, moderately closely punctured. Thorax deplanate, very shining, very strongly transverse, a little narrowed behind; hind angles not prominent, slightly obtuse; punctuation not coarse, subobsolete on the disc. Elytra rather broad and short, depressed, the lateral margin broad, the striæ obsolete, the biseriate interstitial punctuation more distinct. Under surface polished, nearly impunctate. Submental area not distinct. Male with the anterior margin of the front femora pubescent. Seven specimens.

This also is a very distinct species. M. Léveillé has compared some of our specimens with Reitter's type, and I accept his determination; the peculiar character of the front legs of the male is not, however, alluded to by Reitter. The single specimen found at Chontales is a variety of large size, and differs in several points from the examples found at San Gerónimo.

8. Tenebroides chevrolati.

Tenebrioides chevrolati, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 72 [1].

Hab. MEXICO [1], Jalapa, Tehuantepec (*Höge*); GUATEMALA, Teleman (*Champion*); NICARAGUA, Chontales (*Belt*).

We have received five examples that I refer—on the authority of an examination of two of them by M. Léveillé—to this species. It appears to me to be distinguished from *T. circumcinctus* only by being of a uniformly piceous colour.

9. **Tenebroides circumcinctus.**

Tenebroides circumcinctus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 419[1].

Depressus, brevis, nitidus, rufus, capite, prothorace elytrisque ad suturam plus minusve late nigricantibus; capite efoveolato; elytris argute striatis, interstitiis latis, biseriatim punctatis.
Long. 6–7 millim.
Var. Rufo-ferrugineus.

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*), Yucatan (*Sallé*[1]), Temax in North Yucatan (*Gaumer*); Guatemala, Yzabal (*Sallé*), Tamahu, San Gerónimo (*Champion*); Nicaragua, Chontales (*Belt*).

Antennæ with rather elongate narrow club. Head flat, somewhat shining, moderately closely and coarsely punctured. Thorax but little rounded at the sides, a little narrowed but not sinuate behind, the lateral margin thick, the hind angles obtuse; shining, coarsely punctate. Elytra with regular striæ—not series of punctures,—the interstices broad, quite flat, biseriately punctate. Ventral segments rather finely punctate, the punctuation in the male denser and finer than in the female.

We have received ten examples of this species. I see very little to distinguish it from *T. chevrolati* except colour, and this is very variable. Thus I suspect that, if they are really distinct, our examples of *T. circumcinctus* must represent more than one species; it is perhaps more probable that the contrary is the case, and that *T. chevrolati* and *T. circumcinctus* are only colour-variations of one species.

10. **Tenebroides facilis,** sp. n.

Depressus, nigerrimus, opacus, antennis tarsisque piceis; elytris obsolete striatis et punctatis.
Long. 10 millim.

Hab. Mexico, Jalapa, Amecameca (*Höge*).

A very distinct species not likely to be confounded with any of the preceding, the black colour and the more or less effaced sculpture of the elytra being characteristic, although the latter point is subject to considerable variation. The antennæ are piceous in colour, with rather long, unusually slender club. The thorax is very strongly transverse, a good deal narrowed and slightly sinuate behind, the reflexed margin thick, the hind angles nearly rectangular, the punctuation fine. The elytra are very flat and dull; the usual striation and interstitial punctuation are present, but are more or less effaced, so that in some examples they can scarcely be distinguished; the seventh stria is, however, always distinct, though those external to it are completely effaced. The male has no tufts on the margin of the submental area, but they are replaced by a slight tubercular elevation on each angle of the margin. Six specimens.

This species is probably allied to *T. opaca,* Reitter. The two specimens from Amecameca belong to a variety of large size and more elongate form.

I have placed with some doubt as a variety of this species four specimens, found at

Jalapa and Toluca (*Höge*) and Omilteme in Guerrero (*H. H. Smith*), that differ from the typical form in being less dull, in having the elytra less obsoletely striate, and the lateral margin of the thorax finer. It is very doubtful whether they are really conspecific with *T. facilis*, but they do not agree sufficiently *inter se* to justify me in separating them.

11. **Tenebroides spectator,** sp. n.

Elongatus, sat depressus, nitidus, nigerrimus, antennis tarsisque rufis; capite prothoraceque crebre fortiter punctatis, hoc basin versus angustato, lateribus posterius sinuatis; elytris striatis, interstitiis obsolete punctatis.

Long. $9\frac{1}{2}$–$10\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Resembles *T. repetitus* of the second division rather than any species of the first division; it has much smaller eyes and a smaller antennal club than *T. deceptor* and *T. celatus*. Head dull, somewhat convex, rather closely punctate, without fovea. Thorax punctured like the head, moderately strongly margined at the sides, much narrowed behind and sinuate near the base, the hind angles slightly prominent externally, nearly rectangular; basal margin quite distinct in the middle. Elytra moderately deeply striate, rather shining, the punctuation of the interstices indistinct. Ventral segments very coarsely punctate. Two specimens.

12. **Tenebroides anceps.**

Tenebroides anceps, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 421 [1].

Hab. MEXICO [1], Jalapa (*Höge, M. Trujillo*); GUATEMALA, Sabo (*Champion*).

The peculiar sculpture of the elytra distinguishes this from all other species of the genus: the usual striæ are here replaced by fine elevated lines, which are here and there minutely interrupted, and are shining; the broad interstices are quite dull, and bear a well-marked biserial punctuation. The club of the antennæ is rather large, and the areæ of sensitive surface very large.

Only one example was obtained in Guatemala; it is a variety of rather smaller size, with the biserial interstitial punctuation of the elytra remarkably definite, the punctures being elongate and almost connected so as to form striæ. It may perhaps prove to belong to a distinct species.

The small series of seven examples from Mexico does not exhibit any variation.

13. **Tenebroides yucatanicus.**

Tenebroides yucatanicus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 421 [1].

Hab. MEXICO, Jalapa (*Höge*), Yucatan (*Sallé* [1]), Temax in North Yucatan (*Gaumer*); BRITISH HONDURAS, R. Hondo, R. Sarstoon (*Blancaneaux*).

In this species the interruption of the basal margin of the thorax is not so conspicuous as it is in most others of this section; and if this character were not correctly observed the species would be supposed to be near *T. rufolimbatus* and its allies in the next section. It is not at all likely to be mistaken for any of our species with interrupted basal margin.

T. yucatanicus varies a good deal in size and colour; the antennæ are short, and the areæ of sensitive pubescence on the club very small. Some of our examples agree perfectly with M. Léveillé's description, and he has also identified the species for us by comparison with his type.

Group 2.—*Prothorax nearly or quite as long as broad.* (Species 14–17.)

14. **Tenebroides bipustulatus.**

Trogosita 2-pustulata, Fabr. Syst. Eleuth. i. p. 152 [1].
Tenebrioides bipustulata, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 67 [2].
Tenebrioides impressifrons, Reitter, loc. cit. p. 66 [3].

Hab. MEXICO, Temax in North Yucatan (*Gaumer*); GUATEMALA, El Tumbador, Pantaleon, Zapote (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA [1], Colombia [3], Cayenne [2], Brazil [3]; ANTILLES [3].

This distinct species varies much in colour, being sometimes entirely shining black, while in other cases the elytra and the ventral segments are more or less broadly marked with red. M. Léveillé has already pointed out (Bull. Soc. Ent. Fr. 1889, p. viii) that spotted specimens are not distinct from those that are entirely black: I have no doubt he is correct in this. Mr. Champion found both forms at Pantaleon. Whether the species is really the *Trogosita bipustulata* of Fabricius is very doubtful, as he states that the thorax is canaliculate in front, while there is not the least trace of such a character in our insect.

15. **Tenebroides sulcifrons.**

Trogosita sulcifrons, Jacq.-Desv. in Sagra's Hist. fisica, polit. y nat. de Cuba, vii., Ins. p. 105 [1]; French edit. p. 253.
Tenebrioides sulcifrons, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 66 [2].

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, El Tumbador (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA, Brazil [2]; ANTILLES, Cuba [1 2].

I refer to *T. sulcifrons*, with much doubt, three specimens from our region; these three individuals were found singly in widely separated localities, and are far from agreeing satisfactorily in their details. They agree in most points with the characters pointed out as distinctive of *T. sulcifrons*, and if that species proves to be very variable they may perhaps really belong to it.

These examples are distinguished from the preceding species by their elongate parallel form, more quadrate thorax (which has short, broad, not acute front angles), and the middle of the head not deplanate, but feebly longitudinally impressed along the middle.

16. **Tenebroides oblongus,** sp. n.

Angustus, parallelus, minus depressus, subopacus, piceo-rufus; prothorace subquadrato, subtiliter marginato, angulis anterioribus latis, brevissime productis, angulis posterioribus obtusis; elytris sat profunde punctato-striatis, interstitiis subtiliter biseriatim punctatis.

Long. 6–7 millim.

Hab. Mexico, Chinantla (*Sallé*), Cordova (*Höge*); Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Head rather finely punctured, dull, very feebly impressed along the middle towards the front. Thorax elongate, slightly narrowed but not sinuate behind; the lateral margin fine, placed rather low down; the front margin but feebly sinuate, so that the front angles are very broad and project but little; the surface rather more coarsely punctured than the head. Elytra elongate and narrow, with series of oblong punctures placed in slight striæ, and with a very fine interstitial punctuation.

Only one example has been procured in each locality.

T. oblongus is allied to *T. sulcifrons*, but the more truncate form of the thorax in front separates it satisfactorily.

17. **Tenebroides mordax,** sp. n.

Elongatus, parallelus, minus depressus, piceus, antennis, pedibus elytrisque versus apicem rufis; elytris fortiter striatis, interstitiis latis, omnium subtilissime punctatis.

Long. 8 millim.

Hab. Costa Rica, Caché (*Rogers*).

Head rather narrow, moderately coarsely punctured, very feebly depressed in the middle in front. Thorax subquadrate, the sides nearly straight, a little narrowed behind, the lateral margin rather fine, the basal margin interrupted for only a short distance in the middle, the front angles much produced, acute. Elytra with deep striæ, which are punctate and continued to the apex; the serial punctures on the interstices are excessively fine and are placed near to the striæ, so that they are liable to be thought absent. Ventral segments coarsely punctate, shining.

We have received only two specimens of this very distinct species; one of them was labelled as having been found alive in a box of beetles. *T. mordax* is perhaps more nearly allied to *T. sulcifrons* than to any other species, though the two are very different. It is probably variable, as the two examples before me differ a little in colour and sculpture.

Division B.—*Basal line of the prothorax not interrupted in the middle (in a very few species this line slightly imperfect in the middle).* (Species 18–52.)

Group 3.—*Insects of large or moderate size, without definite markings.* (Species 18–41.)

18. **Tenebroides difficilis.**

Tenebroides difficilis, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 421 [1].

Hab. British Honduras, Belize (*coll. Léveillé* [1]).

M. Léveillé has not recognized this species among the series I sent him. It appears to be an insect somewhat allied to *T. latus* and *T. harpaloides*, having the basal line of the thorax scarcely interrupted, and therefore intermediate between the two divisions of the genus. It was described from a single example.

The insect, by mistake, is quoted by M. Léveillé as from Yucatan [1].

19. **Tenebroides latus.**

Tenebroides latus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 423 [1].

Hab. Mexico [1], Huitzo in Oaxaca (*Höge*).

We have received only one specimen that agrees with the description of *T. latus*, and my determination of it has been confirmed by M. Léveillé. The species bears a great resemblance to *T. facilis*, but is rather shorter and less depressed, and has the basal margin of the thorax scarcely interrupted in the middle.

20. **Tenebroides undulatus,** sp. n. (Tab. XIII. fig. 15.)

Valde depressus, niger, nitidus, minus parallelus; capite prothoraceque crebre subtiliter punctatis; elytris subtilius striatis, striis ad latera et ad apicem omnino obsoletis; pedibus piceis; antennis piceo-rufis.
Long. 10–12 millim.

Hab. Guatemala, Totonicapam 8500 feet (*Champion*).

Head without any fovea, somewhat finely punctured. Thorax much narrowed behind and strongly sinuate at the sides; the posterior angles not prominent, a little obtuse though very nearly rectangular; the lateral margin fine, especially towards the base; the surface shining, black, rather finely punctured. Elytra not parallel at the sides, pitchy-black, but little shining, the striæ and interstitial punctuation more or less obsolete, and scarcely to be detected at the sides and apex. Ventral segments sparingly punctate. Seven specimens.

This and the following four or five species are extremely closely allied. *T. undulatus*, however, is less parallel, and has the sculpture of the elytra more obsolete than in the rest of the group. I have not observed any sexual distinctions in it. Found beneath the bark of pines (*Champion*).

21. **Tenebroides alticola,** sp. n.

Sat elongatus, depressus, niger, nitidus; capite prothoraceque crebre subtiliter punctatis; elytris subtiliter punctato-striatis, interstitiis obsolete punctatis; pedibus piceis, antennis tarsisque rufescentibus.
Long. 9–10 millim.

Hab. GUATEMALA, Totonicapam 8500 feet, Quiche Mountains 7500 feet, Dueñas (*Champion*).

In this species the thorax is narrowed behind and sinuate at the sides; the anterior angles are broad and not elongate, the lateral margin moderately raised. The striation of the elytra consists of series of punctures nearly conjoined to form continuous striæ, and the interstitial punctuation is very obscure; the striæ are much obliterated behind. The punctuation of the ventral segments is coarse but not very dense, and there is apparently but little difference between the sexes in this respect.

T. alticola differs from *T. undulatus* by the rather less depressed and more parallel form and the less obliterated sculpture of the elytra. It is at first sight more similar to *T. repetitus*, but has the anterior angles of the thorax less produced and less acute and the striation of the elytra more obsolete behind.

We have received five examples of *T. alticola*. I also refer provisionally to it three specimens found in Mexico—by Höge at Esperanza and Jalapa, and by Sallé at Puebla,—which have the thorax a little more rounded at the sides in front and more narrowed behind, and the punctuation of the ventral segments rather less coarse. Two specimens found by Blancaneaux on the R. Sarstoon in British Honduras have a deeper striation on the elytra and a coarser punctuation on the ventral segments. But it is not advisable to treat these as belonging to distinct species.

22. **Tenebroides harpaloides.**

Tenebroides harpaloides, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 423 [1].

Minus elongatus, depressus, niger, nitidus; capite prothoraceque crebre subtiliter punctatis; elytris subtiliter punctato-striatis, interstitiis distincte biseriatim punctatis; antennis pedibusque rufis.
Long. 8–8½ millim.

Hab. MEXICO [1], Jalapa (*Höge*).

Head broad and short, somewhat closely punctate, with a small fovea on the middle. Thorax short and broad, rather finely margined at the sides, rounded at the anterior angles, which are broad and but little produced. Elytra with series of punctures which are nearly conjoined to form fine striæ, and with a very distinct interstitial punctuation. Ventral segments extremely coarsely punctate.

The two specimens received are male and female; the male has fine punctures mixed with the larger ones at the base of the first ventral segment and a small patch of similar punctuation at the outer edge of each of the three following segments.

Though *T. harpaloides* is one of a group of most closely allied forms, and although

I have seen only two specimens of it, I think it must certainly be separated from *T. alticola*: the well-developed interstitial punctuation, in contrast with the fine striation, the finer lateral margins to the thorax, and the coarse punctures on the ventral segments, being its chief distinctions. M. Léveillé has been good enough to lend me his unique type on which the species was founded, and I believe it to belong to the species I have described above, though the characters of *T. harpaloides* are not quite so strongly marked in it as they are in our specimens.

23. **Tenebroides repetitus**, sp. n.

Elongatus, subparallelus, niger, nitidus, subdepressus, subtus pedibusque piceis, antennis sordide rufis; capite prothoraceque crebre punctatis; elytris regulariter striatis, interstitiis biseriatim punctatis.
Long. 11–13 millim.

Hab. MEXICO (*ex coll. Sturm*), Jalapa (*Höge*), Cordova (*Sallé*); GUATEMALA, Capetillo, near the city of Guatemala (*Champion*).

Head dull, moderately closely punctate. Thorax narrowed behind, not sinuate at the sides, the hind angles slightly prominent, the lateral and basal margins almost equally thick throughout, the surface shining, rather coarsely and closely punctate. Elytra subparallel, rather elongate, marked with distinct striæ which are not obsolete at the extremity, and at the sides are represented by series of remote punctures, the interstices broad, flat, and distinctly biseriately punctate. Under surface piceous; ventral segments very densely punctate; in the male the punctuation at the sides dense and minute over a considerable area.

Mr. Champion met with a good series of this insect at Capetillo, and these examples do not vary much, except that in some of them the head has a small fovea which is not present in others. The specimens from other localities are very few in number, and vary much; but I cannot distinguish them as species in a satisfactory manner, and prefer to treat them as varieties of one only.

24. **Tenebroides zunilensis**, sp. n.

Depressus, sat elongatus, piceus, nitidus; capite prothoraceque nigricantibus, dense punctatis, hoc lateribus piceis, illo foveolato; elytris striatis, interstitiis biseriatim punctatis; antennis pedibusque rufis.
Long. 10 millim.

Hab. GUATEMALA, Cerro Zunil, Mirandilla (*Champion*).

Head shining, closely and coarsely punctured. Thorax rounded at the sides and strongly sinuate behind; lateral margin moderately raised; front angles rather broad, less acute than usual; the surface closely and deeply punctured. Elytra with regular distinct striæ, and with very distinct biserial punctuation on the interstices. Ventral segments closely punctate.

This species is distinguished from its allies by the thorax being more sinuate behind, and the elytra evidently striate, with very little trace of punctuation in the striæ. As

in *T. repetitus*, the male has the coarse punctuation of the ventral segments to a great extent replaced by fine subobsolete punctures.

25. **Tenebroides marginicollis,** sp. n. (Tab. XIII. fig. 16.)

Depressus, subparallelus, parum nitidus, piceus, limbo plus minusve distincte dilutiore; prothoracis marginibus bene elevatis; elytris seriatim punctatis, interstitiis obsolete punctatis.
Long. 11 millim.

Hab. Guatemala, Capetillo, Dueñas (*Champion*).

In this species the surface has a peculiar appearance, somewhat as if slightly greasy. The head is rather large, not foveolate, moderately finely punctate. The thorax is but little rounded at the sides, slightly narrowed behind, the anterior angles much produced, slender, the lateral margin rather strongly elevated, similar for all the length; the surface punctate like the head; the lateral margins ferruginous, usually more broadly so at the front angles. Elytra depressed, scarcely striate, but with very distinct series of punctures, and very fine punctuation on the interstices. Ventral segments closely punctate.

Distinguished from all the varieties of *T. repetitus* by the more parallel-sided thorax, the lateral margins of which are more strongly and evenly elevated.

26. **Tenebroides instabilis,** sp. n.

Parum elongatus, depressus, nitidus, niger, antennis pedibusque rufis; prothorace basin versus sat angustato, minus sinuato, crebre subtiliter punctato; elytris subtiliter striatis, interstitiis subtilius biseriatim punctatis.
Long. 6–7 millim.

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*).

Head small, not shining, not densely punctate, the punctures smaller in front, the forehead not, or very indistinctly, foveate. Thorax strongly transverse, the lateral margins not coarse, the sides not much rounded, distinctly narrowed behind but not sinuate, the punctuation moderately dense, not coarse. Elytra finely striate.

This, too, appears to be a variable species. I have treated as the type of it four specimens found by Höge at Jalapa with finely striate elytra; but the seven other examples have the elytra more deeply striate, though in a variable degree. *T. instabilis* appears, however, to be distinct from *T. harpaloides*—to which it comes very near—by its considerably narrower head, the insect being in this respect similar to *T. rufolimbatus*.

27. **Tenebroides incertus.**

Tenebroides incertus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 423[1].

Hab. Mexico[1].

This species seems, from the description, to be allied to *T. harpaloides* and *T. instabilis*.

28. **Tenebroides iteratus,** sp. n.

Sat latus, minus parallelus, depressus, minus nitidus, piceus, elytris puncto humerali limboque rufescentibus; dense punctatus, elytris striatis, interstitiis biseriatim punctatis; antennis pedibusque rufis.
Long. 7 millim.

Hab. Mexico, Jalapa (*Höge*).

Head moderately broad, coarsely punctate, unimpressed, rather dull. Thorax strongly transverse, sinuate at the sides and much narrowed behind; lateral margin only moderately thick; anterior angles broad, acuminate, though but little produced; the surface densely and coarsely punctate, slightly shining. Elytra not parallel, moderately deeply striate, the interstices flat, with rather fine biserial punctuation; the outer margins, especially behind, are reddish, and there is also a small humeral spot of the same colour.

We have received only one example of *T. iteratus*; by means of *T. longulus* and it, *T. repetitus* and its allies are closely connected with *T. rufo-limbatus.*

29. **Tenebroides rufo-limbatus.**

Tenebroides rufo-limbatus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 424[1].

Hab. Mexico [1], Omilteme (*H. H. Smith*), Orizaba (*Godman*), Puebla, Cordova (*Sallé*), Jalapa (*Höge, M. Trujillo*); Guatemala, El Tumbador, Cerro Zunil (*Champion*).

This is a variable species, the length of the specimens before me varying between $6\frac{1}{2}$ and 10 millim.; the colour sometimes is shining black on the upper surface, without the rufescent margins from which the species derives its name. The rather elongate, narrow, little-depressed form and the deep striation of the elytra, as well as the shape of the thorax, are apparently less variable, and permit the identification of the species. I have included as varieties four examples which may perhaps prove not to belong to it, viz. a very strongly punctate form with a red humeral spot, found at Jalapa by Höge; a pale ferruginous specimen with very deeply striate elytra, also found by Höge in the same locality; and the two examples procured by Mr. Champion in Guatemala, which are very deeply striate, and have the lateral margins of the thorax a little more raised.

30. **Tenebroides longulus,** sp. n.

Parallelus, angustus, sat depressus, nitidus, piceus, capite prothoraceque nigricantibus, hoc ad latera, præsertim anterius, rufescente; fortiter punctatus, elytris profunde striatis; antennis pedibusque rufis.
Long. $6\frac{1}{2}$–$7\frac{1}{2}$ millim.

Hab. Guatemala, El Tumbador, Cerro Zunil (*Champion*).

Head broad, coarsely punctate, not dull, almost unimpressed. Thorax moderately short, much narrowed behind, shining, coarsely punctate; lateral margin rather thick; front angles much produced, acute. Elytra narrow and parallel, shining, deeply

striate, the interstices a little convex, with a remote biserial punctuation. Ventral segments coarsely punctate; in the male with much fine punctuation on the side of each segment. Two specimens.

This insect is allied to *T. repetitus*, but it is not so large, and differs by the important character that the lobes of the club of the antennæ are considerably smaller. From *T. rufo-limbatus*, which at first sight it nearly resembles, it differs in its broader thorax, with thicker lateral margins and more acute anterior angles, and its rather broader head.

31. **Tenebroides auriculatus,** sp. n.

Minus elongatus, subdepressus, rufo-piceus, supra piceus, limbo plus minusve evidenter dilutiore; capite densissime fortiter punctato; elytris profunde striatis, interstitiis fere impunctatis.
Long. 5½–7 millim.

Hab. GUATEMALA, El Tumbador, El Reposo, Zapote (*Champion*).

Head depressed in front, very coarsely punctate, the punctures more or less elongated and confluent. Thorax short, much narrowed behind, coarsely punctate, shining; lateral margin moderately coarse; anterior angles much produced, broad, subexplanate, less acute than usual. Elytra subparallel, deeply striate, the biserial interstitial punctures remote and very fine. Prosternal process moderately coarsely punctate. Nine examples.

This species bears some resemblance to the smaller examples of *T. rufo-limbatus*, but is considerably smaller, and is readily distinguished by the punctuation of the head and by the different shape of the front angles of the thorax. In the male the punctuation of the ventral segments is much finer than it is in the female.

32. **Tenebroides bonvouloiri.**

Tenebroides bonvouloiri, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 424[1].

Hab. MEXICO[1], Jalapa (*Höge*), San Andres (*Sallé*); GUATEMALA, Senahu, Chacoj (*Champion*), Coban (*Conradt*).

Var. *chontalensis*. Capite anterius densissime ruguloso-punctato.

Hab. NICARAGUA, Chontales (*Janson*).

To judge from the small series we have received this must be a very variable species; the specimens are, however, only one or two in number from each locality. The length varies between 4½ and 7½ millim. In some of the individuals the basal line of the thorax is very nearly, if not quite, interrupted in the middle.

33. **Tenebroides lucidus,** sp. n.

Angustus, parallelus, piceus, supra æneus, nitidus, antennis pedibusque rufis; elytris profunde striatis.
Long. 7–8 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This species is distinguished by the brilliant brassy colour of the upper surface and the deep striation of the elytra. The antennæ are short, pale red, the club rather small. The head is coarsely, moderately closely punctate. Thorax but little rounded at the sides, narrowed behind and sinuate, the lateral margin fine, the anterior angles broad and short, acuminate; surface very shining, coarsely and deeply, moderately closely, punctate. Elytra parallel, with deep regular striæ extending to the apex, the striæ marked by large and deep punctures, the interstitial punctuation being remote and indistinct. Under surface piceous, shining, the ventral segments with very coarse punctures.

34. **Tenebroides excellens,** sp. n.

Angustus, subparallelus, piceus, supra æneus, nitidus, antennis pedibusque rufis; elytris punctato-striatis, striis ad apicem nullis.

Long. 7–8 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

At first sight very like *T. lucidus*, but there can be no difficulty in distinguishing the two by the difference in the striation, the striæ being in *T. excellens* much less deeply impressed, and quite obsolete at the extremity. The head and thorax are black, strongly tinged with brassy tint, moderately coarsely and closely punctate, very shining; lateral margin of the thorax fine, the anterior angles rather small. Elytra with regular series of punctures, the interstices perfectly flat and distinctly biseriately punctate. Ventral segments in the male finely, in the female moderately coarsely, punctate. Two specimens.

35. **Tenebroides sallæi,** sp. n.

Brevis, latus, depressus, opacus, rufescens, supra fuscescens, margine rufo-fusco; prothorace fortiter transverso; elytris seriatim punctatis, interstitiis haud perspicue punctatis.

Long. 6 millim.

Hab. MEXICO (*Sallé*).

Antennæ with the joints of the funiculus very short, but the club large. Head flat, very dull, rather finely punctate. Thorax strongly transverse, curved at the sides in front and much narrowed behind, the hind angles rectangular, the lateral margin rather fine, the anterior angles large, but much produced and acute; the surface very dull, rather closely and finely punctate. Elytra with regular series of punctures, the punctures fine and connected so as to form very fine striæ, which are obsolete at the apex; the interstices broad, flat, scarcely visibly punctate, not quite so dull as the thorax and head. Under surface shining, the ventral segments rather finely punctate.

Only one example has been received of this distinct species. It is perhaps more nearly allied to *T. godmani* than to any other species known to me.

36. **Tenebroides godmani,** sp. n. (Tab. XIII. fig. 17.)

Brevis, subparallelus, subopacus, rufus, capite prothoraceque nigricantibus, hoc brevissimo, subtiliter punctato.
Long. 6 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ red, the joints of the funiculus very short, the club large. Head rather large, flat, somewhat sparingly and finely punctate. Thorax unusually short and broad, the anterior angles very broad, much produced, the sides feebly bisinuate, narrowed behind, the lateral margin rather fine, the surface finely, somewhat sparingly punctate, transversely convex. Elytra convex, red, with regular series of punctures placed on extremely obscure striæ, the interstices flat, almost impunctate. Prosternum in front of the coxæ very little punctate, the process behind the coxæ densely and coarsely punctate. Two specimens.

This is one of the most easily recognized species of the genus. One of the two examples received has the ventral segments more finely punctured, and is no doubt a male.

37. **Tenebroides reitteri.**

Tenebroides reitteri, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 420[1].

Latus, subdepressus, ferrugineus, subnitidus, prothorace elytrisque in medio nigricantibus; elytris fortiter punctato-striatis, interstitiis haud omnino planis.
Long. 6–6½ millim.

Hab. Panama, Bugaba, Tolé (*Champion*).—South America, Brazil[1].

Head dull red, finely punctured. Thorax very strongly transverse, distinctly narrowed behind, somewhat finely punctured. Elytra broad and short, with impressed series of rather coarse punctures, the interstices of the series somewhat narrow and convex. Under surface with very little sculpture; terminal ventral segment with the anterior portion shining, the posterior part covered with dense, minute pile. Two specimens.

This is an easily recognized insect, and is not likely to be confounded with any of our other species. The dark colour along the middle of the upper surface is not quite similar in the two individuals, and may probably be very variable. The unusually elongate terminal joint of the antenna suggests an affinity with *T. depressus* and *T. celatus.*

M. Léveillé assures me that the Panama spcimens are undoubtedly conspecific with his *T. reitteri*, and has kindly repeated his comparison at my request; I am therefore bound to accept his decision. At the same time it is only right to say that I think it highly probable the Panama insect will prove to be distinct from the true *T. reitteri*, M. Léveillé's description being inapplicable in several respects to the insect before me. *T. reitteri* is said[1] to have the basal margin of the thorax interrupted; in our insect the basal margin is uninterrupted, though when looked at from behind it appears somewhat obsolete in the middle.

38. **Tenebroides helophorus,** sp. n. (Tab. XIII. fig. 18.)

Elongatus, subparallelus, minus depressus, nitidus, piceus, supra ænescens, antennis pedibusque rufis, illarum clava, harum tibiis, nigris; prothorace margine laterali extus fortiter punctato.
Long. 6½–10 millim.

Hab. Mexico, Jalapa, Chilpancingo (*Höge*), Playa Vicente (*Sallé*).

Antennæ with an elongate black club, the terminal joint much longer than the preceding one. Head rather narrow, somewhat closely and coarsely punctured. Thorax moderately long, the anterior angles greatly produced, the sides narrowed and sinuate behind, the lateral margin marked externally with coarse punctures—these are largest behind, and cause the margin, when viewed in some directions, to appear crenate; surface coarsely and closely punctured. Elytra elongate, marked with regular series of rather coarse punctures; interstitial punctuation very indistinct. Ventral segments sparingly but coarsely punctate, and bearing an elongate, scanty, depressed setosity.

This species may be readily recognized by the coarse punctuation on the lateral margin of the thorax. Some other species (*T. anceps* and *T. nigro-viridis*, Lév. e. g.) that have an unusually coarse sculpture on the outer margin of the thorax are very different in appearance from *T. helophorus*. The seven examples received of this species show much variation in size and colour, and a good deal in the sculpture of the upper surface.

39. **Tenebroides nigro-viridis.**

Tenebroides nigro-viridis, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 427[1].

Hab. Mexico, Guanajuato (*Dugès, in coll. Sallé*[1]), Yolotepec (*Sallé*).

A very distinct species allied to *T. helophorus*, but of remarkably elongate form, and with obsolete sculpture on the elytra. We have received only two examples, both in a bad state of preservation.

40. **Tenebroides pollens,** sp. n. (Tab. XIII. fig. 19.)

Major, robustus, minus depressus, nitidus, piceus vel niger, antennis pedibusque rufis; capite prothoraceque subtiliter punctatis; elytris striatis, striis dense punctatis, interstitiis subconvexis, lævigatis.
Long. 11–14 millim.

Hab. Mexico, Jalapa (*Höge*), Cordova (*Sallé*); British Honduras, R. Sarstoon, R. Hondo (*Blancaneaux*); Nicaragua, Chontales (*Janson*).

Antennæ with large club, the terminal joint twice as long as that preceding it. Head broad, flat, dull, finely punctate, with a small fovea near the middle. Thorax strongly transverse, slightly rounded at the sides, scarcely narrower at the base than in front, the anterior angles much produced, acute, the lateral margin fine; the surface finely and rather sparingly punctate; basal margin with a slight angular dilatation in front in the middle. Submental area large and coarsely punctate.

This is a very different species from any other *Tenebroides* found in our region, and may probably be allied to *T. antennalis*, Reitter, from Colombia. We have received eight examples of it; the one from Chontales has the striation of the elytra finer than the others.

41. **Tenebroides explanatus.** (Tab. XIII. fig. 20.)

Tenebrioides explanatus, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 73 [1].

Hab. Panama, Volcan de Chiriqui (*Champion*).—South America, Colombia [1].

Also a very distinct species, with the front of the head elongate, and a large club to the antennæ. The thorax is very strongly transverse, but considerably narrower than the very broad elytra.

Group 4.—*Insects of very small size, with variegated or metallic surface.*
(Species 42–52.)

42. **Tenebroides gracilipes,** sp. n. (Tab. XIII. fig. 21.)

Parvus, parum elongatus, depressus, testaceus, subopacus, subtiliter punctatus, elytris obsolete striatis.
Long. 3 millim.

Hab. Panama, Bugaba, Tolé (*Champion*).

Antennæ quite pale, with large club. Head flat, finely punctate. Thorax very strongly transverse, slightly narrowed behind; front angles a little produced, rather broad; hind angles slightly obtuse; basal and lateral margins fine, the latter uninterrupted; surface dull, rather finely punctate. Elytra with fine, indistinct striæ and very fine interstitial punctuation. Legs very slender.

The two examples received of this species are no doubt male and female, as one of them has a large transverse depression on the terminal ventral plate and the front margin of the depression bears a few hairs; this may perhaps be the female; no trace of this depression exists in the other specimen.

T. gracilipes is not like any other species of the genus; its small size and pallid colour give it some resemblance to the Cryptophagidæ.

43. **Tenebroides fenestratus.**

Tenebroides fenestratus, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 425 [1].

Hab. Mexico [1], Juquila (*Sallé*), Jalapa, Esperanza (*Höge*); Guatemala, Purula (*Champion*).

Herr Höge procured a small series of eight examples of this species at Jalapa; they exhibit some variety in size, colour, and sculpture, though not in an extreme degree. The two specimens found by Mr. Champion in Guatemala are somewhat different, being of rather larger size and darker colour, with the pallid mark on the elytra less

extended in the anterior direction, so that it forms with the one on the opposite elytron a fascia interrupted at the suture.

44. **Tenebroides sericatus,** sp. n.

Parvus, sat latus, subdepressus, parum nitidus, æneo-niger, antennis rufis, pedibus testaceis; elytro singulo macula parva testacea notato.

Long. 5 millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Antennæ reddish-yellow, with rather large club. Head and thorax dull, somewhat finely punctate, the latter very strongly transverse, slightly picescent about the margins. Elytra rather dull, with regular series of moderately large punctures, and with a scarcely visible interstitial punctuation; each with an indefinite yellow spot placed in front of the middle. One specimen.

I separate this from *T. fenestratus* on account of the rather larger size of the joints forming the club of the antennæ; except for this character I should have treated the insect as an extreme variety of that species. *T. sericatus* has, however, the thorax very short, and its surface quite dull, the serial punctuation of the elytra coarser and the interstitial punctuation more obsolete, and the yellow mark smaller.

45. **Tenebroides bimaculatus,** sp. n. (Tab. XIII. fig. 22.)

Parvus, piceus, supra æneus, nitidus, antennis, pedibus elytrorumque maculis duabus parvis, testaceis.

Long. $3\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This insect also appears to be very closely allied to *T. fenestratus*, though it is only half the size, and differs slightly in nearly all its details from any specimen I have seen of that species. The joints of the club of the antennæ are somewhat more elongate and less broad than they are in *T. fenestratus*. The head and thorax are very shining, the former smaller than in *T. fenestratus*, and rather more coarsely and sparingly punctured, the latter very short and more strongly rounded at the sides in front. The serial punctuation of the elytra is well developed, but the interstitial punctuation is scarcely visible; the spot on each wing-case is placed in the same position as it is in *T. fenestratus*, but is small, and does not extend halfway to the external margin. One specimen.

46. **Tenebroides sennevillei.**

Tenebroides sennevillei, Léveillé, Ann. Soc. Ent. Fr. 1888, p. 425 [1].

Hab. Mexico [1]; Guatemala, Yzabal (*Sallé*), Chacoj, Torola, Zapote, Pantaleon (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba, Tolé (*Champion*).

This is apparently the least rare of the smaller species of *Tenebroides*, and varies very little.

47. **Tenebroides albomaculatus.**

Tenebrioides albomaculata, Reitter, Verh. Ver. Brünn, xiii., Abhandl. p. 78[1].

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Yzabal (*Sallé*), Panzos (*Champion, Conradt*), Chacoj (*Champion*).—South America, Colombia[1].

48. **Tenebroides complicatus,** sp. n. (Tab. XIII. fig. 23.)

Parvus, depressus, piceus, nitidus, supra testaceo-variegatus brevissime setulosus, antennis, tibiis tarsisque testaceis; crebre punctatus; prothorace basin versus fortiter angustato.
Long. $4\frac{1}{2}$ millim.
Mas capite infra anterius longe piloso.

Hab. British Honduras (*Blancaneaux*); Guatemala, Volcan de Atitlan, Pantaleon, Zapote, Torola (*Champion*).

Antennæ with elongate, slender club, which is darker in colour than the basal portion. Head large, elongate, closely punctate, reddish in front. Thorax greatly narrowed behind; anterior angles much produced; lateral margin fine; basal margin not interrupted in the middle; the surface closely punctate, the colour blackish in the middle, broadly pale at the sides, narrowly so along the front margin. Elytra rather short and broad, testaceous, with a black mark at the scutellum, a flammulate black mark on the disc, a smaller humeral mark, and a hamate lateral-posterior mark, all these dark marks nearly or quite connected with the large discoidal patch; they are feebly striate and have a fine but numerous interstitial punctuation. The male has the whole of the front part of the head behind the mouth covered with fine, long, depressed hairs.

Ten specimens were procured of this very distinct species.

49. **Tenebroides politus,** sp. n.

Piceus, supra viridi-æneus, nitidus; elytris politis, subtiliter striatis, interstitiis haud perspicue punctatis.
Long. 5 millim.

Hab. Guatemala, Pantaleon (*Champion*).

Antennæ with the basal joints dusky-red; the club nearly black, large, and with large sensitive areæ. Head duller than the thorax and elytra, somewhat sparingly punctured. Thorax rather strongly transverse, almost straight at the sides, a little narrowed behind, the hind angles nearly rectangular, the front angles slightly produced, broad, the lateral margin crenate, the basal margin entire, but almost interrupted in the middle; the surface very shining, quite sparingly punctate. Elytra, when seen from the outer side, appearing striate, but seen from the other side looking as if bearing series of punctures without striation; the surface very polished, without interstitial punctuation.

This is another very distinct species, of which only one example has been received. It is to a considerable extent intermediate between the division with basal margin uninterrupted, and that in which the basal margin is absent in the middle.

50. **Tenebroides fulgens,** sp. n. (Tab. XIII. fig. 24.)

Niger, nitidus, supra capite prothoraceque æneo-auratis, elytris purpureis.
Long. $4\frac{1}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ black, with extremely large club. Head rather small, convex, moderately coarsely punctured. Thorax of a golden-brassy colour, very shining, somewhat sparingly punctate, rounded at the sides and narrowed behind, the front angles a little prominent, the lateral margin crenulate, the basal margin uninterrupted. Elytra with series of punctures, viewed from the outside appearing striate, of a beautiful metallic purple colour, very shining. Ventral segments sparingly and obsoletely punctate.

Allied to *T. politus*, though very different in colour. M. Léveillé informs me that it also approaches *T. gounellei*, Lév. Only one specimen has been received.

51. **Tenebroides mœrens,** sp. n.

Minutus, niger, nitidus, antennis pedibusque rufo-obscuris; prothorace basin versus angustato.
Long. 3 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Antennæ thick, dark red, the two joints preceding the club transverse, the joints of the club adpressed and with very small sensitive areæ. Head narrow, convex, somewhat closely and coarsely punctured. Thorax rather narrow, much narrowed behind, the front angles scarcely at all produced, the lateral and basal margins very fine, the latter uninterrupted; the surface somewhat sparingly punctate. Elytra shining, obscurely striate, with scarcely visible interstitial punctuation.

Only one specimen has been received of this distinct little species. It differs greatly from *T. politus* and *T. fulgens* in the structure of the antennæ.

52. **Tenebroides zapotensis,** sp. n. (Tab. XIII. fig. 25.)

Parvus, subcylindricus, niger, antennis elytrisque rufis, his ad apicem nigris, pedibus piceis.
Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Zapote (*Champion*).

Antennæ red, stout, the three joints of the club broad, but adpressed, their sensitive areæ small. Thorax quadrate, transversely convex, straight at the sides, truncate in front, with the anterior angles not at all produced, the lateral margin as fine as the basal margin, the latter not interrupted in the middle; the surface coarsely punctate. Elytra bright red, broadly black behind, with regular series of impressed punctures, the lateral series very fine but quite distinct, the interstices finely but distinctly punctured. Legs broad, the middle tibiæ with two spinules on the outer edge.

Only one specimen was obtained of this very distinct species; in size and appearance it resembles a *Corticeus* (*Hypophlœus*), a genus of Tenebrionidæ.

COLYDOBIUS, gen. nov.

Corpus gracile, subcylindricum. Oculi liberi, a prothorace distantes. Prosternum anterius truncatum, angulis anterioribus nullo modo productis, processu post coxas crasso.

The little insects for which I establish this genus have a different structure of the prosternum from *Tenebroides*, and can, in addition to this, be distinguished at a glance by the fact that the eyes are placed far in advance of the front margin of the thorax. The mandibles are thick, toothed internally before the apex. The eyes are not emarginate, and are placed close to the base of the antennæ. The antennary grooves are short and strongly convergent. The mentum is not visible, being directed to the interior of the mouth. The submentum consists of an elongate quadridentate margin. The palpi and antennæ are the same as they are in *Tenebroides*, and the epistome also is formed as in that genus. The prothorax is elongate, with a very fine lateral margin; the flanks of the prosternum are not in the least prolonged in front, the prosternum extending in a quite straight line from side to side; the coxæ are placed very near to the side margins; and the prosternal process is protuberant behind. The process of the abdomen behind the hind coxæ is rather protuberant. The epipleuræ are extremely slender. The general facies is rather that of *Rhizophagus* or some of the Colydiidæ than of Trogositidæ.

1. **Colydobius divisus,** sp. n. (Tab. XII. fig. 25.)

Angustus, parallelus, subcylindricus, rufus, supra piceus, elytrorum dimidio posteriore rufo-testaceo.
Long. 4 millim.

Hab. Panama, Bugaba (*Champion*).

Head and thorax rather finely punctate; the latter elongate, slightly narrowed behind, all the angles a little rounded, the lateral and basal margins fine, the lateral margin in front placed low down and quite obsolete. Elytra slender, with very regular series of fine punctures, and a very fine seriate, interstitial punctuation. Two specimens.

2. **Colydobius signatus,** sp. n.

Gracilis, subcylindricus, piceus, supra nigricans, elytris plagis quatuor rufo-testaceis; antennis pedibusque piceo-rufis.
Long. 4 millim.

Hab. Guatemala, Volcan de Atitlan (*Champion*).

Antennæ rather long, red, with elongate, somewhat laxly articulated, picescent club. Head elongate, broadly, but slightly, depressed on the middle in front, rather closely and finely punctate. Thorax elongate, very convex transversely, the lateral margin excessively fine, scarcely visible from above; the surface black, shining. Elytra with fine series of punctures, which become effaced behind, and with a fine interstitial punctuation; each with a large reddish-yellow mark at the shoulder, and a smaller one behind the middle. A single specimen.

Fam. SYNTELIIDÆ *.

Tarsi quinque-articulati, simplices, articulis basalibus quatuor æqualibus. Antennæ subgeniculatæ; clava lata, compressa. Abdomen e segmentis quinque ventralibus, septem dorsalibus, totis corneis, compositum. Coxæ anteriores conico-cylindricæ, sat exsertæ, contiguæ. Coxæ posteriores valde transversæ, contiguæ. Elytra abbreviata.

The genus *Syntelia* was ascribed by Westwood to the Trogositidæ, but it has recently been rejected from that family by Léveillé, and is until now therefore without precise location. It is clear that it cannot be placed in the Trogositidæ, but is allied to the Silphidæ and Histeridæ, and should be treated, I think, as the type of a separate family to be placed near to the two families I have just mentioned. The genus has already been indicated as the type of a new family by Lewis (Ent. Monthly Mag. xix. p. 137), but is at present without detailed description or characters. The latter I have endeavoured to supply above, but more detail will be found in the description of the genus *Syntelia* below. The only genus that can at present be certainly placed in the family is *Syntelia*; but *Sphærites*, whose position has been varied from the Histeridæ to the Silphidæ, shows so many points of resemblance with *Syntelia* that I think it would be a correct course to remove it from the Silphidæ—its usual position at present—and place it in the Synteliidæ as a separate subfamily thereof, characterized by the anterior coxal cavities being open behind, whereas they are closed by the junction of the epimera with the prosternal process in *Syntelia*.

In the Ann. & Mag. Nat. Hist. 5th ser. xiii. p. 137, Mr. Lewis alluded to the remarkable genus he afterwards described under the name of *Niponius*, as being a member of the Synteliidæ; but in his paper descriptive of the genus (Trans. Ent. Soc. Lond. 1885, pp. 331–335, t. 8) he withdrew this opinion and placed *Niponius* as an aberrant member of the Histeridæ. In so doing he was, I think, quite correct. *Niponius* cannot be placed in the Synteliidæ on account of its round posterior coxæ, which are rather widely separated, and of the structure of the sterna, which agree fairly well with the Histeridæ, but are very different from those of *Syntelia*.

The family Synteliidæ is distinguished from the Histeridæ by the contiguous anterior and hind coxæ, by the transverse posterior coxæ, by the want of co-adaptation between the pro- and mesothorax, and by the different relations of the side pieces of the meso- and metathorax. It agrees with the Histeridæ in the peculiar form of the antennæ and in the structure of the hind body or abdomen. The family differs from the Silphidæ in the form of the antennæ and mandibles, in the absence of trochantins to the front

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and middle coxæ, in possessing only five ventral and seven dorsal plates to the hind body, and in the dorsal plates being entirely corneous. This latter character is very curious; so far as I know, it occurs in no other Coleoptera having the hind body covered by the elytra except in the Histeridæ, and, in conjunction with the peculiar antennæ, indicates an undoubted affinity between the Synteliidæ and the Histeridæ. M. Sallé, who has seen *S. mexicana* alive and has given a brief account of it in the Rev. et Mag. Zool. 1873, p. 11, seems to have entertained the opinion that it is allied to the Histeridæ, although when he captured it he supposed it might be a Lucanid allied to *Ceruchus*.

SYNTELIA.

Syntelia, Westwood, Proc. Ent. Soc. Lond. 1864, p. 11.

Syntelia was founded by Westwood on a species from E. India and one from our region. Since then a second species from Mexico and one from Japan have been added. All are very rare in collections, though from the remarks of Mr. Lewis (Ent. Monthly Mag. xix. pp. 137, 138) it seems probable that any one acquainted with their habits might procure them freely. They are pretty certainly all predaceous.

I have dissected an example of *S. westwoodi* and find some points of interest to be added to the characters of the genus as given by Westwood.

The labrum is closely soldered with the head, of which it forms the anterior part, and the front is folded downwards and inwards between the mandibles. The mentum is very short, strongly transverse, and forms on each side a short angular projection in front; the ligula is very elongate and is divided quite to the base, the inner margins of each lobe being ciliated quite to the base (Tab. XIV. fig. 1 *b*); the supports of the labial palpi are quite exposed, are rather widely separated, and each one is soldered to the outer face of the corresponding lobe of the ligula.

The front of the prosternum has a margin which forms a strong angular projection in the middle. The median portion of the prosternum is continued backwards between the coxæ as a lamina which is concealed between them, but behind them expands and forms a process for the reception of the apices of the epimera. There are no trochantins on the front coxæ. The prothorax enjoys free movement, and there is no co-adaptation between its hind part and the front of the mesosternum.

The middle coxæ are deeply imbedded, their cavities being subcircular, a little prolonged, however, externally, and trochantins are absent; they are moderately widely separated; no division can be traced between the mesothoracic epimera and episterna. The metasternum is rather long, its episterna very broad, the epimeron only slightly exposed behind the point of the episternum. I can determine no mesothoracic stigma. The hind body is rather short, but its segments are very mobile. The basal

four dorsal plates are equal in length, are corneous, and each is coarsely sculptured at the base; the following two plates have a silky and slightly pubescent surface; the apical plate is very large. There are, in the male, two or three small internal segments in addition to the œdeagus.

The species of *Syntelia* probably prey on larvæ of timber-feeding or other insects. Lewis met with *S. histeroides* on the trunks of small oaks in the wood of which larvæ of one of the Hepialidæ were feeding.

1. **Syntelia westwoodi.** (Tab. XIV. figg. 1; 1 *a*, labium and outer face of the maxillæ; 1 *b*, inner face of the labium.)

Syntelia westwoodi, Sallé, Rev. et Mag. Zool. 1873, p. 13, t. 9. fig. 3 [1].

Hab. Mexico, Tehuacan (*Höge*), Rancho de la Parada in Oaxaca 8000 feet [1].

This species differs considerably in appearance from its congeners, and somewhat resembles *Necrophorus*. I can detect no sexual distinctions in the nine examples that I have before me of the species.

2. **Syntelia mexicana.** (Tab. XIV. fig. 2.)

Syntelia mexicana, Westw. Proc. Ent. Soc. Lond. 1864, p. 11 [1]; Sallé, Rev. et Mag. Zool. 1873, p. 12, t. 9. fig. 2 [2].

Hab. Mexico (*Mus. Mniszech* [1]), Orizaba (*Sallé* [2]).

S. mexicana very closely resembles *S. indica* and *S. histeroides* from the Eastern hemisphere. Only two examples exist in collections, so far as I know; they were found by M. Sallé at Jacale, on the slope of the Peak of Orizaba, under an enormous fallen pine near the snow. Westwood's description was taken from one of these specimens, then in the collection of the late Count Mniszech; the other is now before me, having been obtained by our Editors with M. Sallé's collection.

Judging from the brief notes that have been published about *S. mexicana* and *S. histeroides*, and from the general resemblance between the two species, it appears probable that *S. mexicana* passes its earlier stages in or under the bark of trees attacked by wood-feeding insects, on whose larvæ it preys, and that in the perfect state it frequents trees from which sap is oozing, flying from tree to tree; the *Syntelidæ* being provided with very powerful wings.

Fam. ADIMERIDÆ *.

Tarsi quasi biarticulati; articulo basali dilato, subtus spongioso; articulo ultimo versus basin articuli basalis inserto; articulis duobus parvis ad basin articuli terminalis adjunctis.

The little insects for which I establish this family have a structure of the tarsus which has not yet, so far as I am aware, been observed elsewhere in the order Coleoptera. The tarsi look at first sight as if they were composed of only two joints, the basal joint having a form and structure similar to the third joint of the tetramerous Coleoptera, and the terminal joint being inserted near its base above; more careful examination, however, shows that there are two small joints attached to the base of the terminal joint. This character is of considerable interest: it is well known that in many Coleoptera, with feet of less than five joints, a small joint can be detected at the base of the terminal joint, so that some writers have used the terms pseudo-pentamera and pseudo-tetramera for such insects. In the foot of the Adimeridæ the dilated joint bearing the pubescence is the basal one, while interposed between it and the terminal joint are two small joints analogous to the single joint similarly placed in the pseudo-tetramera I have referred to.

The other characters, which will be found in some detail in the description of the genus *Adimerus*, are those of the Colydiidæ; the division of Colydiidæ to which the family Adimeridæ perhaps most approximates is the Rhagoderinæ. The Adimeridæ in appearance more resemble the Aglycyderidæ, but are distinguished therefrom by the dilated joint of the foot being the first, not the second, and by the anterior acetabula being open instead of closed.

ADIMERUS, gen. nov.

Antennæ ad capitis latera, sub margine, insertæ, setosæ, decem-articulatæ; articulo ultimo clavam parvam formante. Coxæ anteriores parvæ, rotundatæ, sat distantes; posteriores parum distantes, sat magnæ, breviter transversæ.

Labrum small, simple, visible beyond the edge of the epistome; mandibles bidentate at tip; mentum quadrate; labial palpi three-jointed, terminal joint large; maxillary palpi with rather large, oval, terminal joint. Antennæ very squamose or setose, especially at the base, inserted at the side of the head at a little distance in front of the eye, in a cavity protected above by a slightly overlapping edge; first and second joints thick, joints 4–9 small and bead-like, tenth joint forming a small club. Prothorax formed as in the Colydiidæ, with slightly open anterior acetabula; the coxæ quite depressed, small, rather widely separated by a margined prosternal process, which spreads out behind them, forming an acute angle separated by a quite narrow

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chink from the end of the side-piece; the acetabula, though really open, thus appear closed except from a certain point of view, there being almost an overlapping of the edge of the side-piece by the angle of the prosternal process. Mesosternum nearly as long as the short metasternum. Middle coxæ globose, slightly separated; hind coxæ moderately large, forming between them a slight emargination for the reception of the abdominal process. Abdomen with five subequal ventral segments, separated by very deep sutures as in many Colydiidæ. Body wingless. Elytra soldered.

The body is covered everywhere with an incrustation, which, being mixed with the setosity of the surface, quite obscures the sculpture and structure.

The structure of the foot (Tab. XIV. figg. 3, 3 *a*) is not only of great interest from certain speculative points of view, but seems to me to necessitate the isolation of these insects from the Colydiidæ, in the whole of which family the tarsi are quite simple and undilated. In some of the Colydiidæ the basal joint of what should be a four-jointed foot is not present, whereas it is this joint that is enlarged to an unusual extent in the Adimeridæ.

This genus occurs in South as well as in Central America, as I have in my collection some species of the genus from Brazil.

1. **Adimerus crispatus,** sp. n. (Tab. XIV. figg. 3, 3 *a*, tarsus.)

Angustus, fusco-ferrugineus, rugosus, setis curvatis ornatus; elytris nigro-maculatis, antrorsum angustioribus.

Long. $2\frac{1}{4}$–$2\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Two basal joints of antennæ thick and very squamose, the first much concealed, the club small, black. Thorax as long as broad, slightly narrowed behind, transversely convex, serrate at the sides, the front angles minutely acute. Elytra very convex transversely, slightly curvate at the sides, so as to be distinctly a little narrower towards the shoulder, very coarsely sculptured, the sculpture consisting of very large and deep closely placed punctures; the second interstice costate; the colour ferruginous, with a large black spot just about the middle; the whole of the surface much encrusted, so as to conceal the colour and sculpture. Tibiæ angularly dilated externally about the middle.

Mr. Champion procured about thirty examples of this curious little insect. They vary but little.

2. **Adimerus setosus,** sp. n. (Tab. XIV. fig. 4.)

Subparallelus, fusco-ferrugineus, rugosus, setis crassis ornatus; elytris nigro-variegatis, suboblongis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan, Cerro Zunil (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet, Peña Blanca 3000 to 4000 feet (*Champion*).

This insect is extremely closely allied to *A. crispatus*, but is more parallel and less convex, and the setæ are apparently broader and are more conspicuous. As in the other species, the surface is so much encrusted that the details cannot be seen; but the form of the elytra sufficiently distinguishes *A. setosus* from *A. crispatus*. Five specimens.

3. **Adimerus dubius.**

Angustus, subdepressus, ferrugineus, rugosus, setis tenuibus ornatus; elytris nigro-maculatis, subparallelis.
Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Cordova, Jalapa (*Höge*), Motzorongo (*Flohr*); BRITISH HONDURAS (*Blancaneaux*).

This species is smaller than *A. setosus*, and the slender setæ are more like simply truncate hairs; the costa on the wing-case is very obscure, indeed can only be seen at the base. The punctuation seems even coarser than it is in *A. crispatus*, from which species *A. dubius* may be distinguished by the more depressed parallel form.

We have received ten specimens of this species; apparently it varies but little.

Fam. COLYDIIDÆ *.

This family of Coleoptera is one of considerable interest, the larger number of its species being confined to the undisturbed forest-regions of the world, where they live amongst decaying wood or vegetable matter mingled with fungoid growths.

The classification of the family is but little advanced; it is indeed in an altogether unsatisfactory state. The Colydiidæ were first separated as a family by Erichson in the 'Naturgeschichte Ins. Deutschlands,' vol. iii., where the genera were defined only in tabular form and by brief notes, many of them possessing no species. Owing to the rarity of these insects in collections, and to the unsatisfactory start made by Erichson, no complete attempt has been made to reconsider the groups of genera established by the German author. Horn has indeed contributed some valuable suggestions concerning the N.-American forms; but the fauna he dealt with is not specially rich in these insects, so that his remarks leave a very large number of the genera untouched.

As we shall have to distinguish about forty genera in the following pages, I think it is necessary to devise some means for their intelligible arrangement, and I have therefore drawn up a brief table of the subdivisions I propose to adopt. Although it is far too soon to attempt a classification intended to be permanent (for probably not one-tenth of the existing genera have been discovered), yet I hope the arrangement may be

* By D. SHARP.

of some use as a clue to the classification of the family until a complete revision can be made.

Although the thirteen groups here defined are fairly natural, yet it is very difficult to arrange them in tabular form, because several characters seem of almost equal importance, and all are subject to much gradation. On the whole, the insertion of the antennæ is the one that best divides the family into two main groups, viz. one in which the antennæ are in repose quite concealed from above, and another in which the basal joint is left exposed in front when the antennæ are retracted. The value of this character as a means of division is, however, very much diminished by the existence of certain forms in which the antennæ are not retracted at all, while there are others in which the basal joint is neither completely concealed nor conspicuous when the antennæ are withdrawn.

For these reasons the following table will be found less satisfactory than the student would wish.

As regards the groups adopted, some of them merge into one another, so that it is not at present possible to say what may ultimately prove to be the best means of limiting them. This is specially the case with the Synchitinæ, the Colydiinæ, and the Tarphiinæ.

1. Antennæ inserted at the sides of the head under the edge of the epistome, by which, however, the basal joint is but little concealed.
   - Hind coxæ approximate; prosternum feebly ciliate behind . . . . . *Nematidiinæ.*
   - Hind coxæ approximate; prosternum with membranous border . . . *Gempylodinæ.*
   - Hind coxæ widely separated . . . . . *Pycnomerinæ.*
2. Antennæ inserted at the sides of the head; the basal joint placed under the edge of the epistome, by which it is more or less completely concealed from above.
   - Antennæ densely clothed with scales or hairs, broad, not distinctly clavate . . . . . *Rhagoderinæ.*
   - Antennæ clavate, inserted near the eyes; basal joint of tarsus scarcely longer than the second; anterior coxal cavities usually open . . . *Synchitinæ.*
   - Antennæ clavate, inserted near the eyes; basal joint of tarsus much longer than the second; anterior coxal cavities closed; tibiæ a little thicker at the tip . . . . . *Colydiinæ.*
   - Antennæ clavate; hind coxæ more or less widely separated, the process between them usually truncate; flanks of prosternum more or less hollow for protection of the antennal club in repose . . . . . *Tarphiinæ.*
   - Antennæ clavate, inserted far from the large, finely facetted eyes . . . *Acropinæ.*
3. Antennæ less widely separated from one another; basal joint exposed even in the state of retraction.
   - Tarsi 4-jointed; terminal joint of maxillary palpus not minute; second joint of antenna inserted more or less distinctly at the back of the first joint.

Front coxæ approximate	*Deretaphrinæ.*
Front coxæ distant	*Bothriderinæ.*
Tarsi 4-jointed; terminal joint of maxillary palpus minute, aciculate.	
Prosternum entire in front	*Cerylinæ.*
Prosternum separated from flanks by a deep fissure	*Lapethinæ.*
Tarsi 3-jointed; visible portion of hind coxa minute, globular, widely separated from the side-piece	*Discolominæ.*

Subfam. *RHAGODERINÆ.*

This group was distinguished by Horn as having antennæ without club, and not capable of being hidden under the head. This definition, however, applies also to some of the Gempylodinæ (which were not known to Horn, there being none of them in the N.-American fauna) and must therefore be amplified. The Rhagoderinæ have the tibiæ slender at the tip, while they are angularly prominent externally in the Gempylodinæ. In this latter group the antennæ are inserted in contiguity with the very large eyes; whereas in Rhagoderinæ the small eyes are separated by a very evident space from the point of the antennal insertion.

The genus *Anchomma* has not been found in our region, although it occurs in N. America and in Chili (*coll. Fry*).

RHAGODERA.

Rhagodera, Erichson, Naturg. Ins. Deutschl. iii. p. 255, nota (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 558.

This genus consists of two North-American species.

1. Rhagodera tuberculata.

Rhagodera tuberculata, Mann. Bull. Mosc. 1843, 2, p. 300[1]; Horn, Proc. Am. Phil. Soc. xvii. p. 559[2].

Hab. North America[1], Alaska to San Diego and Arizona[2].—Mexico, Tehuacan in Puebla (*Höge*).

The individuals of the small series found in our region apparently only differ from a specimen from Arizona by their rather smaller size and slightly more prominent hind angles of the thorax.

The very great extension of this species, from Alaska to Central Mexico, is most remarkable, and suggests that a careful comparison should be made of individuals from different localities, with a view of ascertaining whether all really belong to one species.

Subfam. *SYNCHITINÆ.*

This group comprises the larger part of the Colydiidæ, but in the present state of our knowledge I see no way of dividing it further than separating the Tarphiinæ and Colydiinæ; and at present the distinction of even these groups by rigid characters is no easy matter.

In the Synchitinæ the antennæ are quite retractile during repose, and frequently there are grooves on the underside of the head to facilitate their complete retraction. All the coxæ are but little separated; there are no depressions on the flanks of the prosternum for the antennæ; the tibiæ are thin at the tip, and in the majority of the genera the anterior acetabula are open behind.

This latter character would probably furnish a better mode of distinguishing the group from the Colydiinæ than that afforded by the relative length of the joints of the hind tarsus; unfortunately it has not been studied in most of the genera, and cannot at present be made use of.

ANISOPAULAX.

Anisopaulax, Reitter, Stett. ent. Zeit. 1877, p. 324.

This genus was established for a Mexican insect that is not included in the collections our editors have amassed, and that I know only from Reitter's description.

1. **Anisopaulax brucki.**

Anisopaulax brucki, Reitter, Stett. ent. Zeit. 1877, p. 324 [1].

Hab. MEXICO [1] (*coll. von Bruck*).

This insect possesses 10-jointed antennæ having a 3-jointed club.

LABROTRICHUS, gen. nov.

Corpus elongatum, convexum, hispidum. Caput exsertum; antennæ undecim-articulatæ, clava discrete biarticulata. Tarsi fere triarticulati; articulo basali omnium brevissimo.

The very short basal joint of the foot distinguishes this insect from most others of the family. *Distaphyla* is allied in this and other respects, but differs from *Labrotrichus* in the structure of the thorax.

Eyes hispid. Antennæ distinctly eleven-jointed, the club consisting of two perfectly separate joints. Antennary grooves quite absent. Anterior acetabula closed, coxæ moderately distant. Metasternum of moderate length. Hind and middle coxæ about as widely separated as the front pair. Hind body moderately long; the first ventral segment only about as long as the second, the fourth much shorter than that preceding or following it. Legs hispid. Tarsi with the basal joint almost invisible, then with

two short equal joints, which taken together are only about one-third or one-fourth as long as the fourth joint.

1. **Labrotrichus aberrans,** sp. n. (Tab. XIV. fig. 5.)

Elongatus, convexus, rugosus, hispido-tomentosus, niger vix variegatus ; prothorace elongato, inæquali.
Long. $3\frac{1}{2}$–5 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Santa Cruz near San Gerónimo (*Champion*).

Antennæ with first joint thick ; second globular ; third slender, longer than broad ; fourth to ninth each perceptibly shorter than its predecessor ; fourth scarcely longer than broad ; tenth and eleventh large, tenth transverse ; terminal joint rounded, pubescent, but quite distinct from the tenth. Head hispid. Thorax elongate, narrowed behind, lobed in the middle in front, transversely very convex, uneven, strongly hispid, hind angles indistinct. Elytra very uneven, but without any evident sculpture, covered with tomentum (or ? exudation) and erect setæ. Legs armed with erect setæ.

Only one example has been procured in each locality. The one from Guatemala is a mere fragment apparently found dead, and may possibly belong to a closely allied species, distinct from the Mexican type.

DISTAPHYLA.

Distaphyla, Pascoe, Journ. Ent. i. p. 104 (1860).
? *Colydodes,* Motschulsky, Etudes ent. 1855, p. 13 (without characters).

This genus includes three Amazonian species, and two others from the Malay Archipelago. The genus *Colydodes,* Motsch., though possessing a distinct place in the Munich Catalogue, is doubtless the same as *Distaphyla.* Motschulsky's name cannot, however, be used, as it was not accompanied by any description.

1. **Distaphyla gibbiceps.** (Tab. XIV. figg. 6 ; 6 *a*, profile of head and thorax.)

? *Colydodes gibbiceps,* Motsch. Etudes ent. 1855, p. 13, t. 1. fig. 11 [1].

Cylindrica, picea, opaca, setosa ; prothorace oblongo, lateribus parallelis serraticulis, margine anteriore processibus crassis duobus.
Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Cerro Zunil, San Gerónimo (*Champion*), Coban (*Conradt*) ; Panama, Volcan de Chiriqui (*Champion*).

Antennæ thick, the club large. Thorax with the sides parallel ; in front marked by a deep transverse depression and prolonged anterior to this into two large hispid, approximate lobes ; behind this there is a deep longitudinal depression extending to

the middle of the thorax, and continued backwards to near the base as three very obsolete grooves; near each side of the thorax there is a broad space free from granules, and including an elevated ridge; close to the base of the thorax there is a transverse channel; the surface elsewhere covered with coarse, low granules. Elytra elongate, with very regular series of punctures, each bearing an erect pale seta.

A fair series was obtained of this curious insect. The thoracic depressions are usually filled by an exudation, which must be removed before the limits of the grooves and impressions can be perceived.

I have applied the trivial name given by Motschulsky to this species after considerable hesitation. Assuming that there is only one species in the State of Panama there can be little doubt this is the insect represented by Motschulsky's figure [1]. If, however, there should, as is quite probable, prove to be more than one species of *Distaphyla* in Panama, Motschulsky's figure will not afford the means of distinguishing them, it being grossly inferior and unaccompanied by a description. Our figure and description are taken from examples found at San Gerónimo by Mr. Champion, and it is to the species these represent that the name of *gibbiceps* should be applied. Had Pascoe's name *Distaphyla* not been published for this genus, I would have made use of Motschulsky's *Colydodes*, treating it as a MS. name; but as the bad figure of the insect was not accompanied by a description of the genus, it seems impossible to supplant *Distaphyla* by *Colydodes*. In the case of the species I have acted differently, and made use of Motschulsky's name with much hesitation—treating the figure as sufficient to warrant the adoption of the trivial name *gibbiceps*, there being no other in existence.

ASYNCHITA, gen. nov.

Corpus subcylindricum, asperatum; antennæ decem-articulatæ, sed articulo basali occulto, articulo decimo abrupte majore, apice pubescente. Acetabula antica aperta. Sulci antennarii nulli. Pedes crassiusculi; tibiis muticis, linearibus, absque calcaribus; tarsis articulis basalibus tribus, brevibus, æqualibus, simul sumtis quam articulo quarto multo brevioribus.

Although very different in appearance from *Synchita* this genus is undoubtedly allied thereto, and may take a position between it and *Distaphyla*. *Asynchita* quite resembles *Distaphyla* in form, but differs in the absence of the peculiar thoracic structures of that genus, and in the club of the antennæ consisting only of one joint, or rather of two joints closely united, for the small terminal pubescent apex clearly represents the true eleventh joint. The antenna is inserted in a deep lateral cavity, in which the basal joint is entirely concealed. The structure of the sterna and ventral segments is that usual in the Synchitinæ.

An insular genus, yet unpublished, resembles *Asynchita*, but has the tarsi only 3-jointed.

1. **Asynchita granosa,** sp. n. (Tab. XIV. figg. 7 ; 7 *a*, posterior tarsus.)

Elongata, subcylindrica, picea, opaca, granulosa, parce hispida ; prothorace lateribus regulariter denticulatis.
Long. 4–5 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ thick, short ; first joint concealed ; second and third subequal in length, the latter rather the more slender ; 4–9 short, the ninth very distinctly transverse ; tenth rather large, with an imperfectly separated pubescent apex. Head finely granulose ; epistome with an angle on each side in front ; eyes free, convex. Thorax rather longer than broad, almost parallel-sided, with the front nearly straight, the base a little rounded, the surface very regularly and distinctly granulate, the sides finely denticulate or tuberculate, each of the little tubercles bearing a fine exserted seta. Elytra with numerous series of fine crenulations, and with fine, scanty, erect, serial setæ.

Five specimens have been procured of this distinct insect.

SYNCHITA.

Synchita, Hellwig, Schneider's Mag. 1792, p. 401.

Synchita has apparently a wide distribution, though it is very doubtful whether all of the fifteen species placed in it really belong to the genus.

1. **Synchita mimetes,** sp. n. (Tab. XIV. fig. 8.)

Minuta, depressa, ferruginea, opaca ; antennis pedibusque testaceis ; prothorace elytrisque costatis, his costis primo et tertio versus apicem conjunctis.
Long. 2 millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

Head short, with a fine raised margin on each side. Antennæ small ; first and second joints very short and thick, equal, the first concealed by the epistome ; joints 3–9 small, nearly equal, the eighth and ninth, however, a little broader, so as to be broader than long ; the third scarcely so large as the fourth ; tenth joint forming an abrupt round club. Eyes very coarsely facetted. Thorax slightly transverse, roughly sculptured, parallel at the sides, which are strongly denticulate ; on each side of the middle with two strongly raised costæ, and at the base nearer the middle with a less strongly raised elevation, which extends about halfway to the front. Elytra coarsely sculptured, each with four costæ in addition to the raised suture ; the third costa curves round near the tip and joins the first. Legs feeble ; tibiæ slender at the tip.

Only one example has been found of this minute species. It closely resembles *Bitoma xuthioides* ; but the coalescent first and third costæ distinguish it very readily even when the structure of the antennæ cannot be seen.

This insect has apparently considerable stridulating capacity, as on pressing the base of the abdomen of the specimen in a relaxed condition an audible sound was always to be heard.

ENDEITOMA, gen. nov.

Corpus tenuiter hispidum. Antennæ decem-articulatæ; articulo tertio elongato; articulo decimo apice pubescente.

This genus comes between *Cicones* and *Colobicus*; it differs from the former by the structure of the antennæ, the third joint of which is remarkably elongate, and the club is not a round joint, but is of an oval shape with a pubescent apex. From *Colobicus* the genus is distinguished by the club not being distinctly divided into two joints.

The epistome is short and undilated, and leaves the labrum uncovered. The eyes are free, convex, only moderately coarsely facetted. The mentum is rather large, transverse. There are short, obscure, antennary grooves, as in *Bitoma crenata*. The coxæ are all very much approximated; the prosternal process is abruptly curved upwards, and the front acetabula are open behind. The epipleuræ are rather broad, and are continued to the apex of the elytra. The legs are simple; the tibiæ are destitute of spurs; the basal three joints of the tarsi are subequal in length.

1. **Endeitoma mexicana,** sp. n. (Tab. XIV. fig. 9.)

Oblonga, picea; capite prothoraceque granulatis, hoc lateribus serratis; elytris parce subtiliter hispidulis, crenato-striatis, interstitiis nitidulis, remote granulatis.

Long. $4\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ slender, sparingly setose; first joint nearly concealed; second rather longer than broad; third three or four times as long as the fourth; 4–9 moderately small, ninth broader than long; tenth joint oval, in larger part bare and shining, but the apex annulate and densely set with pubescence. Head flat, densely granulate. Thorax transverse, the sides parallel, serrate, the posterior angles distinct, rectangular, the surface closely granulate. Elytra with numerous series of fine crenulations; the interstices broad, shining, viewed from behind appearing transversely wrinkled, and from in front sparingly granulate; the setæ are fine, long, erect, but scanty.

Only one specimen has been procured of this species. The long third joint of the antennæ distinguishes it from all the other Synchitinæ yet known from our region. It is probable that the North-American *Synchita granulata*, Say, may be allied to *E. mexicana*.

2. **Endeitoma panamensis,** sp. n. (Tab. XIV. fig. 10.)

Minor, oblonga, ferruginea; antennis pedibusque flavis; capite prothoraceque granulatis, hoc posterius angustato, lateribus serratis; elytris subtiliter crenato-striatis, minute, parum perspicue, hispidulis.

Long. $2\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ small and slender; third joint a little longer than the second; club small.

Head broad and short; epistome very broad in front. Thorax about as long as broad, very distinctly narrowed behind; hind angles indistinct; lateral margin very distinctly serrate. Elytra finely crenate-striate; interstices rather broad, dull, a little uneven, but without distinct granules; setosity minute and scanty.

Only one example was obtained of this little insect. It is nearer to the genus *Synchita* than is *E. mexicana*.

PHLŒONEMUS.

Phlœonemus, Erichson, Naturg. Ins. Deutschl. iii. p. 258, nota (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 568.

This genus comprises some half-dozen species, and is distributed from the United States of North America to Colombia.

1. **Phlœonemus adhærens**, sp. n. (Tab. XIV. fig. 11.)

Testaceo-ferrugineus; subtus planus, supra transversim sat convexus, nudus; prothorace carinulis irregularibus subtilibus; elytris regulariter carinatis, interstitiis biseriatim punctatis, seriebus singulis crenatis.
Long. $4\frac{3}{4}$ millim.

Hab. Guatemala, San Gerónimo (*Champion*).

Antennæ reddish; the basal joint stout, above concealed by the explanate epistome, quite visible beneath; second joint scarcely longer than broad; 3–9 small, the ninth broader than long; tenth and eleventh forming a broad, loosely-articulated club, the eleventh joint pubescent at the tip. Epistome dilated and rounded in such a manner as to form an angle outside each eye. Thorax transverse; front rounded in the middle, deeply and broadly emarginate on each side; lateral margins explanate, entire; surface finely and distinctly granulate, with an interrupted fine raised line between the side and the middle, and with a pair of median, fine, serpentine lines, each divided behind so as to enclose a space. Elytra each with five very regular uninterrupted costæ, between each pair two very regular rows of punctures, each puncture connected with the one following it by a fine raised line. Sculpture of under surface obsolete.

Only one example was obtained of this remarkable insect.

2. **Phlœonemus interruptus.**

Phlœonemus interruptus, Reitter, Stett. ent. Zeit. 1877, p. 330[1].

Hab. Mexico[1] (*coll. Haag*).

According to the description this is larger (7 millim. long) than *P. adhærens*, and has the costæ of the elytra several times interrupted.

ACOLOBICUS, gen. nov.

Corpus ovatum, subtus planum, supra transversim convexum. Antennæ debiles, decem-articulatæ; clava magna, uniarticulata, articulo nono elongato. Sulci antennarii perfecti, extrorsum curvati.

The obscure insect for which this genus is established comes nearer to *Acolophus* than to any other I am acquainted with, but the two are quite distinct by the structure of the antennæ. Erichson's definition of *Cicones* would lead one to suppose that *Acolobicus* might be very near it; but this is not the case, for *Cicones* has only imperfect oblique antennary grooves.

In *Acolobicus* the eyes beneath are elongate, and the antennary groove extends the whole length of the inner margin of the eye, curving outwards behind it. All the coxæ are approximate, and the anterior acetabula are open. The legs are short, with feeble tibiæ and tarsi; the latter are 4-jointed, the basal three joints short and subequal, the suture between the first and second not so distinct as usual.

1. **Acolobicus obscurus,** sp. n. (Tab. XIV. fig. 12.)

Ovatus, parvus, subtiliter sculpturatus, opacus, fuscus; limbo, antennis pedibusque testaceis; prothorace elytrisque subtilissime costatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Chiacam, Chacoj, San Gerónimo, Torola (*Champion*); PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

Antennæ small, yellow; first joint concealed; the club rather large, solid, oval, the joint preceding it not transverse. Thorax transverse; sides explanate; front angles much produced; the sculpture very obsolete; on each side the middle are two very fine elevated crenate lines, and outside these a third, more obscure line; the colour is fuscous, with the explanate margins yellow. Elytra dull, each with several very fine raised crenate costæ, the broad intervals very finely biseriately crenate. Tibiæ and tarsi very slender.

2. **Acolobicus** ——?

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

A single specimen, in too bad a state of preservation for description; but evidently distinct from *A. obscurus*.

EUCICONES, gen. nov.

Corpus ovatum, supra hispido-squamosum. Antennæ decem-articulatæ; clava uniarticulata. Sulci antennarii perfecti, extrorsum curvati, subocculti. Pedes breves, tibiis extrorsum hispidis.

This genus is allied to *Acolobicus*, but differs in numerous points of detail, and more especially in the hispid tibiæ. The facies is that of *Colobicus*, from which *Eucicones* is distinguished by the undivided club of the antenna. *Eucicones* almost agrees with Erichson's definition of *Cicones*, but that genus has the antennary grooves very different.

Head short; epistome emarginate in front, leaving the labrum visible. The body above clothed with erect scales or setæ, without costæ. Antennary grooves very perfect, curved outwards behind the eye, much concealed by the prominent edge of the flat under surface of the head. All the coxæ are approximate, and the anterior acetabula open. Metasternum moderately long; ventral segments short. Epipleuræ broad. Femora short, not extending at all beyond the sides of the body. Tibiæ moderately stout, clothed externally with short scales. Tarsi 4-jointed, the three basal joints short and subequal, together scarcely equal in length to the fourth.

1. **Eucicones perfectus,** sp. n. (Tab. XIV. fig. 13.)

Oblongo-ovalis, transversim convexus, squamis erectis seriatis ornatus; subtus ferrugineus, supra nigricans; limbo antennis pedibusque testaceis; elytris ferrugineo-signatis.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, El Tumbador, Cerro Zunil, Capetillo (*Champion*).

Antennæ yellow; the first joint concealed, the third small, the ninth transverse; club rounded, quite solid. Head short, quite even above, clothed with short erect setæ. Thorax transverse, rounded at the sides and narrowed in front; sides explanate, set with short setæ; the surfa ce not distinctly sculptured, but bearing numerous closely-placed erect setæ. Elytra blackish, with some ferruginous marks transversely placed near the base, and with another series of pallid marks behind the middle; sculpture consisting of series of punctures with crenulations between them, the longitudinal intervals set with very regular erect setæ, some of which are black, others white; the lateral margins are densely set with short setæ directed backwards. Ten specimens.

HYSTRICONES, gen. nov.

Corpus hispidum, prothorace basin versus angustatum. Antennæ decem-articulatæ; clava uniarticulata. Sulci antennarii imperfecti, breves. Pedes elongati, tibiis hispidis.

Allied to *Cicones* and *Glyphocryptus*, but not very close to either.

Antennary grooves short and oblique, almost as in *Cicones*. Anterior acetabula open; all the coxæ distinctly separated. Metasternum rather short. First ventral segment unusually short. Legs long and slender; tibiæ thin at the tips, without apical spurs, but armed externally with erect setæ; tarsi with three subequal short joints and a fourth very long apical one.

1. **Hystricones armatus,** sp. n. (Tab. XIV. fig. 14.)

Parvus, supra sat convexus, setis crassis erectis armatus, niger, supra testaceo nigroque variegatus; antennis tibiis tarsisque testaceis; prothorace brevi, lateribus denticulatis, denticulo singulo seta erecta aucto.

Long. 2 millim.

Hab. MEXICO, Motzorongo (*Flohr*); GUATEMALA, El Tumbador, Las Mercedes, Cerro

Zunil, Zapote, Capetillo, Senahu, Chiacam (*Champion*); Panama, Volcan de Chiriqui 2500 to 6000 feet (*Champion*).

Antennæ with joints 3–10 small; the club moderately large, quite undivided. Thorax short, deeply emarginate in front on each side, so that the front angles are prominent; each side is armed with four or five denticles, each bearing a seta directed outwards; the surface is rough, and, like the head, is studded with short, thick, erect setæ. The elytra are rather short and broad, broader behind than at the shoulders; they are variegate with yellow and black in a variable manner, are finely crenate-striate, and are studded with short erect setæ. Under surface black, with but little sculpture; mesosternum across the middle with three cell-like spaces.

A small series of this species has been obtained; there is a good deal of difference in colour amongst the specimens.

DITAPHRUS, gen. nov.

Corpus ovatum, subtus planum, supra transversim convexum. Antennæ breves, undecim-articulatæ; clava magna, biarticulata, sutura fere rigida. Sulci antennarii imperfecti, obliqui. Pedes breves, debiles.

Epistome strongly rounded. Eyes large. Antennæ with the basal joint concealed; the club very large, divided into subequal parts, which are very closely connected. Head beneath with oblique, imperfect, antennary grooves, somewhat as in *Cicones*. All the coxæ approximate; anterior acetabula slightly open. Legs very feeble; tibiæ slender, not hispid, not at all thickened towards the base; tarsi small, four-jointed, but the division between the first and second joints indistinct.

The two-jointed club of the antennæ, with imperfect division between the two subequal joints, is an interesting character of this genus.

In Pascoe's collection, now in the British Museum, there is an insect labelled *Bitoma saginata*, Pascoe. This is a species of *Ditaphrus*, but I cannot find that it has been described.

1. **Ditaphrus championi**, sp. n. (Tab. XIV. fig. 15.)

Ovatus, opacus, ferrugineo-testaceus, nigro-variegatus, subtiliter sculpturatus; prothorace elytrisque subtiliter costatis.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Las Mercedes, Zapote (*Champion*).

Head testaceous in front, blackish behind. Thorax transverse; sides explanate, the margins not crenate; the middle dark, the margins yellow; on each side the middle are two fine elevated costæ, the outer of which is gently curved on to the anterior margin of the thorax; front angles prominent. Elytra quite dull, each with several extremely fine longitudinal costæ, the outer one of which runs into the epipleural margin beyond the middle; the colour is in larger part ferruginous, with several black marks. Sculpture of under surface fine and obsolete.

Only three examples have been received of this species. One of them is a male, and I find it very difficult to detect in it a clear separation between the first and second joints on the hind feet.

ANEUMESA, gen. nov.

Corpus parvum, subtus planum, supra convexum, costatum. Antennæ parvæ, undecim-articulatæ; clava biarticulata, sed articulis imperfecte disjunctis. Sulci antennarii tenues sat perfecti. Pedes breves, debiles.

This interesting genus is an intermediate form in two very important respects—the antennæ have a two-jointed club with imperfect separation between the two joints, and the antennary grooves are in a similarly doubtful condition. It is thus, to some extent, intermediate between *Acolobicus* and *Ditaphrus*. It is, however, in its general characters very close to the latter genus; but whereas in *Ditaphrus* the antennary grooves are shallow and comparatively broad, in *Aneumesa* they are slender and rather deep, and limited internally by a fine distinct line. The division between the first and second joints of the hind tarsi is, as in *Ditaphrus*, less distinct than usual.

If a division of the Synchitinæ were based on the presence or absence of distinct antennary grooves, this genus would come in the first category; while *Ditaphrus*, on the contrary, would have to be placed in the division in which these grooves are absent.

The type of Pascoe's genus *Zanclea* looks exactly like an *Aneumesa*, but the description states that the antennæ are 12-jointed, and there are no antennary grooves. We must therefore treat *Aneumesa* as distinct until it can be shown that Pascoe was wrong as to these two important particulars.

1. **Aneumesa atomaria,** sp. n.

Ovalis, supra convexa, testacea, opaca; elytris nigro-signatis, capite posterius prothoraceque disco infuscatis; prothorace elytrisque costatis.

Long. $1\frac{3}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ very small, short, pale yellow; ninth joint small, transverse; club divided by a quite straight fine suture into two equal parts. Head short, with a fine supra-ocular line close to the eye. Thorax transverse; sides explanate; front angles much produced; two strong costæ on each side of the middle, the exterior one curving round inwards on the front margin; sculpture of the surface very minute and obscure. Elytra broad and short, continuous in outline with the thorax, the sides explanate; yellow, with several definite black marks, the largest of which is scutellar; there are several very fine longitudinal costæ, surmounted by extremely minute yellow setæ; sculpture of the intervals extremely obscure. Legs short and slender. Under surface extremely finely sculptured.

Zanclea testudinea, Pascoe, from the Amazons, is, according to the type specimen, a broader insect than *A. atomaria*, and has a shining surface.

2. **Aneumesa costata,** sp. n. (Tab. XIV. fig. 16.)

Ovalis, supra convexa, testacea, fusco-signata, subnitida ; prothorace elytrisque costatis, his intervallis biseriatim punctatis.

Long. $2\frac{3}{4}$ millim.

Hab. GUATEMALA, Purula (*Champion*).

Although closely allied to *A. atomaria*, this species is of considerably larger size, and is easily distinguished by the comparatively more shining surface, by the more distinct sculpture of the elytra, and the more broadly explanate margins.

Head broad, flat, fusco-testaceous, paler in front; antennæ clear yellow. Thorax rounded at the sides; hind angles obtuse: lateral margins broadly explanate; the costæ strongly elevated, waved; the disc rather flat, a little shining, sparingly punctate. Elytra with the costæ finely crenate at the summit, the broad depressed intervals a little shining, each with two very definite series of rather large punctures. One example.

MICROSICUS, gen. nov.

Antennæ decem-articulatæ; clava uniarticulata. Sulci antennarii desunt. Pedes breves, femorum apicibus haud liberis.

Antennæ very small, with quite undivided terminal joint. Antennary grooves absent. Anterior acetabula open. All the coxæ moderately separated. Ventral segments short. Legs very short; apices of the femora not projecting in the least beyond the epipleuræ; tibiæ short and slender, not thicker at the apex, clothed externally with short depressed setæ, the terminal spur very minute; tarsi with the basal three joints short, subequal.

This genus is allied to *Cicones*, from which it is distinguished by the absence of antennary grooves and by the short legs. The North-American *Synchita parvula* resembles *Microsicus* very greatly; but it has the antennary grooves as well developed as they are in *Cicones*, so that it would be better, I think, that it should form a distinct genus.

1. **Microsicus setosus,** sp. n. (Tab. XIV. fig. 17.)

Testaceus, supra fusco-variegatus, limbo ciliato, setis numerosis irregulariter dispositis vestitus; elytris præterea setis crassioribus, erectis, seriatis, ornatis.

Long. $1\frac{1}{2}$–$1\frac{3}{4}$ millim.

Hab. GUATEMALA, El Tumbador, Pantaleon, Zapote (*Champion*).

Thorax transverse, nearly straight at the sides; hind angles slightly obtuse; lateral margins finely crenate and armed with short setæ; the surface very slightly uneven, setose; the sides narrowly explanate. Elytra short, yellowish, with numerous black marks; sculpture very indistinct, owing to the plentiful setosity; they are not costate, though they have at first sight the appearance of being so, owing to the larger setæ being arranged in a serial order. Legs very short, pale yellow.

CATOLÆMUS, gen. nov.

Corpus minutum, subtus planum, epipleuris prominulis; supra sat convexum, squamulis omnium brevissimis ornatum. Antennæ parvæ, decem-articulatæ; clava uniarticulata. Pedes brevissimi, debiles. Sulci antennarii perfecti, extrorsum curvati.

This genus is established for an insect that is amongst the most minute of the yet discovered Colydiidæ. It is most nearly allied to *Aneumesa*, but differs from it by the inflexed epipleuræ, which form a sharp prominent margin to the underside of the body. The antennary grooves are remarkably perfect. The coxæ are all extremely approximate; the anterior acetabula are open. The legs are remarkably short; the tibiæ slender, not armed externally or at the tip.

1. **Catolæmus minutus,** sp. n. (Tab. XIV. fig. 18.)

Ovalis, testaceus, capite prothoracisque disco infuscatis; elytris argute nigro-signatis; superne undique squamulis brevissimis, suberectis, albidis ornatus.
Long. 1½ millim.

Hab. Guatemala, Pantaleon (*Champion*).

Antennæ extremely short. Thorax short, much narrowed in front; anterior angles prominent; posterior angles very obtuse; sides explanate, entire. Elytra continuous in outline with the thorax, a little broader behind; pale yellow, with a common black mark about the scutellum, and an apical dark mark enclosing a yellow spot on each, the apical mark extending forwards at the side nearly to the shoulder, and with a shorter and broader anterior prolongation near the suture. The sculpture is very obscure and consists apparently of fine striation; the extremely regularly-arranged scale-like setæ are directed backwards on the elytra, forwards on the thorax.

Only one example of this minute Colydiid was obtained.

BITOMA.

Bitoma, Herbst, Käfer, v. p. 26 (1796).
Ditoma, Illiger, Mag. vi. p. 320 (1807); Erichson, Naturg. Ins. Deutschl. iii. p. 265.
Synchytodes, Crotch, Check-list Col. of Am. north of Mex. p. 45 (1873).

This genus includes at present about thirty species, and is apparently almost cosmopolitan in distribution.

One of the species I have provisionally placed in it is totally different in appearance from the rest, and will no doubt have to be removed.

The emendation of *Ditoma* in place of *Bitoma* cannot be adopted, as it amounts to the substitution of a new name for a prior one.

1. **Bitoma exarata.** (Tab. XIV. fig. 19.)

? *Coniophœa exarata*, Pascoe, Journ. Ent. ii. p. 91, t. 5. fig. 8[1].

Depressa, parallela, brunnea, squamulis pallide ochraceis vestitus; antennis pedibusque rufis.
Long. $3\frac{1}{2}$–4 millim.

Hab. Guatemala, El Reposo, Pantaleon, Zapote (*Champion*).—Amazons, Ega[1].

This remarkable insect is of the form and sculpture common to the majority of the species of the genus, but the punctuation is concealed by peculiar large, flat, clay-coloured scales, while the costæ appear more elevated in consequence of being surmounted with a closely packed series of such scales. The disposition of the costæ on the thorax and elytra is the same as in *B. ornata*. The antennæ are rather stout, with an abrupt two-jointed club. The structural characters seem to be entirely the same as in *B. ornata*.

Pascoe[1] founded the genus *Coniophœa* for an insect the type of which I am quite unable to distinguish by examination of the upper surface from *B. exarata*. He remarks that it, "except for its antennary grooves and the large basal segment of the abdomen, would approximate to *Bitoma*." Our Central-American insect has neither of the characters mentioned by Pascoe, and until the under surface of his type be examined we cannot ascertain whether his remarks were based on erroneous observation, or whether *C. exarata* is structurally distinct from the *Bitoma*, which—in that case—it superficially exactly resembles. The former was I have no doubt the case.

2. **Bitoma socialis.**

Bitoma socialis, Pascoe, Journ. Ent. ii. p. 81[1].

Parva, angusta, depressa, fusca; antennis pedibus elytrisque testaceis, his vage longitudinaliter fusco marginatis.
Long. 2–$2\frac{1}{4}$ millim.

Hab. British Honduras (*Blancaneaux*); Guatemala, Izabal (*Sallé*), Chacoj and Panima in Vera Paz, Zapote, El Reposo (*Champion*).—Amazons, Ega[1].

Antennæ small, clear yellow, the club large. Head small, its front yellowish; epistome feebly emarginate in the middle and rounded on each side. Thorax parallel-sided, serrate at the edges; on each side of the middle are two sharply elevated costæ, the outer distinctly flexuous, and along the middle with two sinuous flexuous ridges broadly interrupted on the middle. Elytra with the sculpture very coarse and the costæ sharply elevated; their colour is yellow, but infuscate along the suture and outer margin, so that sometimes only a vague stripe along the middle of each remains yellow. Underside of head with the eyes large and less widely distant than in the allied species.

A very large series of this species was obtained at Zapote; there are a few specimens of an entirely testaceous variety amongst the examples. Our specimens quite

agree with Pascoe's type, but I should not have surmised the identity from his description.

3. **Bitoma subfasciata,** sp. n.

Depressa, fusca; elytris versus humeros et apicem rufescentibus; antennis pedibusque rufis.
Long. 3 millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Zapote, Capetillo, Chacoj, Chiacam, San Gerónimo, Tamahu (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Very closely allied to *B. socialis*, but in all its variations differing somewhat in colour, the elytra being infuscate across the middle transversely, or entirely fuscous; it is a somewhat larger insect, with rather smaller club to the antennæ, and the underside of the eyes not so large, so that the eyes on the under surface of the head are separated by a wider space. The epistome in *B. subfasciata* is more truncate, being not emarginate in the middle, and having the sides less rounded. The sculpture of the upper surface is not so coarse in *B. subfasciata* as it is in *B. socialis*.

B. subfasciata is equally close to *B. ornata*, but the latter insect is more elongate; the red markings form four definite spots on the elytra, and the eyes underneath are considerably less large.

A pale unicolorous variety occurs not unfrequently in this species. This variety resembles *B. pauxilla*, Pascoe, which, however, is a considerably narrower and smaller insect.

4. **Bitoma ornata.**

Ditoma ornata, Leconte, Proc. Acad. Phil. 1858, p. 63[1]; Horn, Proc. Am. Phil. Soc. xvii. p. 566[2].

Hab. NORTH AMERICA, California[1 2], Arizona[2].—MEXICO, Northern Sonora (*Morrison*).

5. **Bitoma centralis,** sp. n.

Depressa, opaca, nigro-fusca; antennis pedibusque rufo-obscuris; elytris sanguineis, singulo nigro triguttato vel subfasciato.
Long. 3 millim.

Hab. GUATEMALA, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Extremely closely allied to *B. ornata* and *B. subfasciata*, though readily enough distinguished in the typical form by the variegation of the elytra; a variety (?) occurs (more commonly than this type form), in which the elytra are entirely obscure blackish, and this I can only satisfactorily distinguish from similar dark varieties of *B. subfasciata* by the larger club to the antennæ. The thoracic carinæ are very strongly elevated, the outer one flexuous; the disc of the thorax between the median lines is hollowed.

The costæ of the elytra are very marked; the intervals are depressed, the sculpture in them rather obscure. The legs are stouter than in the allied species. Eleven specimens.

6. **Bitoma gracilis.**

Gracilis, depressa, fuscescens; antennis pedibusque testaceis; elytris rufo-testaceis, medio transversim fusces-centibus.
Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Northern Sonoro (*Morrison*), Vera Cruz (*Sallé*), Tehuantepec (*Höge*); GUATEMALA, Paraiso (*Champion*).

Antennæ yellow, with large club. Epistome not at all emarginate, rounded at the sides. Thorax conspicuously narrower than the elytra, very obscurely crenulate at the sides; with the usual costæ, which, however, are not so strongly raised as in the allied species, but with the minute setosity more distinct, pallid. Elytra yellowish or with a tinge of red, with a more or less distinct mark across the middle, and also the sides dark; with the usual costæ strongly raised, finely ciliate, the sculpture of the deep broad intervals coarse.

The few specimens we have received of this insect I am unable to reduce to a variety of any of the other species; they are much narrower than *B. subfasciata*, and differently sculptured; they have the antennal club as large as in *B. socialis*, but have the thoracic sculpture much less marked, besides differing in the arrangement of the colours.

7. **Bitoma sulcata.**

Ditoma sulcata, Leconte, Proc. Acad. Phil. 1858, p. 63 [1]; Horn, Proc. Am. Phil. Soc. xvii. p. 566 [2].

Hab. NORTH AMERICA [1], California and Arizona [2].—MEXICO, Northern Sonora (*Morrison*).

Although this insect has entirely the appearance of a typical *Bitoma*, it nevertheless adds considerably to the difficulty of defining the genus, as the club of the antenna is intermediate between the 2- and the 3-jointed forms, and the antennary grooves are more distinct. In another structural character, *B. sulcata* approaches *Xuthia*: it possesses a fine interocular margin, which is entirely wanting in *B. ornata* and the more typical species of the genus.

8. **Bitoma jejuna.** (Tab. XIV. fig. 20.)

Bitoma jejuna, Pascoe, Journ. Ent. i. p. 102 [1], and ii. p. 82 [2].

Capite utrinque supra oculum marginato. Ferruginea, subdepressa; prothorace elytrisque costatis, illo haud transverso.
Long. $2\frac{1}{2}$ millim.

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Zapote, Capetillo, San Gerónimo (*Champion*).—Brazil, Rio Janeiro [1].

Resembles *B. sulcata*, but is rather narrower and less depressed. Head broad and short; epistome free, and with its outline continued as a fine margin over the eye. Antennæ small; first joint nearly concealed, ninth scarcely broader than the eighth; club broad, its two joints only loosely connected. Thorax straight at the sides, about as long as broad, the sides only obsoletely serrate; on each side of the middle with two sharply raised costæ, the inner of which converge a little towards the base; on the front margin in the middle are two short obscure elevations; the surface granulate. Elytra with the usual five elevated costæ, which extend unconnected to the tip, the interstices rather finely and obscurely sculptured. Legs short and rather stout; tibiæ thicker towards the tip, but not angularly enlarged there.

This species connects *Bitoma* with *Xuthia*. I have retained it in *Bitoma* as it is less cylindric in form than *Xuthia*, and the tibiæ are not angularly enlarged at the tip; moreover, in many of its characters it is approached by *B. sulcata*.

9. **Bitoma pascoei**, sp. n. (Tab. XIV. fig. 21.)

Major, elongata, fusco-nigra, opaca; antennis tarsisque rufo-obscuris; inæqualis, prothorace lateribus ante medium dilatatis, rotundatis; elytris argute carinato-tuberculatis.

Long. 5¼ millim.

Hab. Mexico, Huitzo in Oaxaca (*Höge*).

Antennæ with the first joint exposed, longer than the second, this latter a little longer than broad; third joint slender, quite as long as the second; ninth joint small, but distinctly broader than the eighth; tenth and eleventh very broad, only loosely connected. Head broad, minutely tuberculate; eyes large, prominent. Thorax much narrowed behind the middle, the surface rendered very uneven by twelve elevations, two on the middle in front, two at the base in the middle, and four on each side. Elytra with about ten short carina-like elevations, making the surface very uneven, without impressed punctures, but with series of minute asperities. Legs slender; tibial spurs scarcely perceptible. Under surface punctate, opaque.

Only one example has been procured of this very distinct insect. It somewhat resembles in form the largest examples of *Illestus terrenus*, Pascoe. I have named it after the diligent English entomologist whom we have so recently lost.

Notwithstanding the fact that this insect is so totally different in appearance from its more normal congeners, the structural characters that I can see in the single example at my disposal do not display any corresponding dissimilarity.

ILLESTUS.

Illestus, Pascoe, Journ. Ent. ii. p. 33 (1863).

This genus was established for a single species, but according to Horn (Proc. Am. Phil. Soc. xvii. p. 570) it is probably not sufficiently distinct from the North-American *Lasconotus*, Er.

1. **Illestus terrenus.**

Illestus terrenus, Pascoe, Journ. Ent. ii. p. 33, t. 3. fig. 4[1].

Hab. Mexico[1], Las Vigas, Esperanza, Toluca, Jalapa (*Höge*), Volcan de Orizaba (*Sallé*).

Var. **tristis.**

Bitoma tristis, Sturm, in litt.

Hab. Mexico, Salazar, Toluca, Huitzo, Cordova (*Höge*); Guatemala, Totonicapam 8500 to 10,500 feet, Quiche Mountains 7000 to 9000 feet (*Champion*).

This is apparently a common and variable insect. In most of the examples the thorax is nearly straight at the sides, instead of being deeply constricted in the middle; these specimens are usually smaller in size than the examples with constricted thorax, and at first appear to be specifically different, but in the series before me there are some intermediate examples.

XUTHIA.

Xuthia, Pascoe, Journ. Ent. ii. p. 128 (1863).

? *Eulachus*, Erichson, Naturg. Ins. Deutschl. iii. p. 275, nota (1845).

I have not seen the Antillean insect for which the name of *Eulachus* was proposed, and cannot therefore say whether it be really congeneric with *Xuthia*, Pascoe. This point can only be decided by an examination of Erichson's type.

I do not think it would be at present advantageous to unite *Xuthia* with *Bitoma*. Although the characters hitherto made use of to separate the two are but slight, yet there is a well-marked distinction in appearance, so that it is probable that minute examination will reveal more important distinctions than those at present known.

Xuthia has been hitherto only known from Celebes, Morty I., and other eastern localities, but it was met with by Mr. J. J. Walker in the Marquesas Islands, so that its occurrence in the New World is not surprising, even in the event of *Eulachus* proving distinct.

1. **Xuthia brevipes,** sp. n. (Tab. XIV. fig. 22.)

Sat elongata, ferruginea, subcylindrica, opaca; prothorace fortius, elytris subtilius, costatis.
Long. $2\frac{3}{4}$ millim.

Hab. Mexico, Cordova (*Sallé*); Panama, Volcan de Chiriqui (*Champion*).

Antennæ short, pallid, club broad; ninth joint short but distinctly transverse. Head broad, supra-antennal ridge much raised. Thorax elongate, parallel, finely crenulate at the sides; on each side of the middle with two strongly elevated costæ, the surface between them somewhat excavate, granulate; on the front a short elevation on each side of the middle, which nearly joins the inner of the two longer costæ. Elytra with five costæ, each continued separately to the tip, the intervals occupied with complex obscure sculpture. Legs short and stout, the tibiæ with the outer apical angle acute. Two specimens from each locality.

This species is extremely closely allied to the Japanese *X. parallela*; *X. brevipes* is, however, less elongate, has the antennæ rather shorter, the head more uneven, with the elevation of the supra-antennal ridges greater.

LADO.

Lado, Wankowiez, Ann. Soc. Ent. Fr. 1867, p. 249.

Lado belongs to the series of genera having the coxal cavities closed. Hitherto it has consisted solely of the rare N.E.-European species, for which it was established; the species I assign to it are apparently really congeneric with the *L. jelskii*.

1. **Lado elegans**, sp. n. (Tab. XIV. fig. 23.)

Angustus, elongatus, subdepressus, ferrugineus, fere nudus; prothorace irregulariter carinato; elytris regulariter parum alte costatis, interstitiis subobsolete sculpturatis.
Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil, Aceituno (*Champion*).

Antennæ yellow, joints 3–8 small; the club large, abrupt, the three joints composing it very laxly articulated, the first two of them strongly transverse. Head subquadrate, surface uneven; eyes convex. Thorax as long as broad, a little narrowed behind; lateral margins finely crenulate; surface rendered uneven by slightly elevated irregular carinæ. Elytra very like those of the genus *Bitoma*, there being several quite regular longitudinal costæ, and between them a coarse though obscure sculpture. Five specimens.

2. **Lado ciliatus**, sp. n.

Angustus, elongatus, minus depressus, ferrugineus, tenuiter ciliatus; prothorace irregulariter carinato; elytris regulariter parum alte costatis, interstitiis fortiter sculpturatis.
Long. $2\frac{1}{2}$–3 millim.

Hab. Mexico, Jalapa (*Höge*); Panama, David, Volcan de Chiriqui (*Champion*).

Although extremely similar to *L. elegans*, I think this a distinct species, the shining pallid ciliation of the upper surface being quite distinct, whereas it can scarcely be detected in *L. elegans*. In addition to this, *L. ciliatus* is not so flat as *L. elegans*, and has the sculpture rather coarser. The four examples we have received are unfortunately not in good preservation.

3. **Lado funestus.** (Tab. XIV. fig. 24.)

Subcylindricus, opacus, tenuiter ciliatus, niger, elytrorum basi rufescentibus; antennarum basi, tibiis tarsisque fusco-rufis; ecostatus, elytris seriatim punctatis.
Long. 3 millim., lat. $\frac{3}{4}$ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,000 feet (*Champion*).

Basal portion of antennæ yellow; club large, black. Thorax longer than broad, very slightly narrowed behind, opaque, very obscurely sculptured, but with irregularly placed, distinct setæ. Elytra long and narrow, black, with the base reddish, quite dull, densely seriately sculptured, and with a barely perceptible elevation of the alternate interstices.

Only one example was obtained of this very distinct species.

LASCONOTUS.

Lasconotus, Erichson, Naturg. Ins. Deutschl. iii. p. 258, nota (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 569.

About ten species have been assigned to this genus, all of them being North-American.

1. **Lasconotus sulcifer,** sp. n. (Tab. XIV. fig. 25.)

Parvus, anguste oblongus, fuscus; antennis pedibusque testaceis; prothorace elytrisque longitudinaliter costatis, his apicem versus late profundeque longitudinaliter, communiter sulcatis.
Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ with joints 3–8 quite small, the three-jointed club large and abrupt. Head deeply and broadly bi-impressed. Thorax longer than broad, finely margined at the sides, delicately punctate and pubescent, with a broad depression along the middle limited on each side by an obtuse costa; these costæ do not reach quite to the front margin, but they are each surrounded at the end by a slight curvate elevation; the extreme base of the thorax is strongly constricted, the true hind angles being thus concealed. The elytra have the shoulders prominent in front; they are broadly and deeply longitudinally depressed along the middle; the suture is scarcely costate in front, but is distinctly so towards the apex; the first interstice is feebly costate, but only on the basal portion; the third interstice limits the broad depression and is strongly costate, and outside it there is also another costa, strongly raised and extending from the base to the apex; the intervals bear obscure serial punctures.

Closely allied to *L. pusillus*, Lec., but narrower, with the shoulders more prominent anteriorly, the elytral depression much more marked, and the costæ more sharply elevated. We have received nearly twenty examples; they vary in colour, some being brownish, but in other respects are very constant.

Subfam. *COLYDIINÆ.*

Basal joint of posterior tarsus much longer than the second; anterior acetabula closed behind; tibiæ more or less enlarged at the tip.

This group comprises some elongate forms, and is closely approached by some of the Synchitinæ—such as *Lasconotus*—that have also closed anterior acetabula. The prosternal process arches under the coxæ, and then is bent upwards behind them. This character distinguishes the group from the Deretaphrinæ, independent of the insertion and structure of the base of the antennæ.

The Colydiinæ are distinguished by no good or constant character, either in Erichson's system or in the present arrangement, from the Synchitinæ; and probably it will ultimately be found better to make the condition of the acetabula the point that shall decide whether a Colydiid belongs to the Synchitinæ or to the Colydiinæ; but this course cannot be adopted till a complete revision of the genera is made. The plan I formerly suggested of uniting the Colydiinæ with the Deretaphrinæ cannot, if attention be paid to the insertion of the antennæ, be considered a proper one, as will be seen by a comparison of this character in a few forms (Tab. XIV. fig. 26 *a*, head of *Colydium*; Tab. XV. fig. 13 *a*, head of *Sosylus*).

COLYDIUM.

Colydium, Fabricius, Ent. Syst. ii. p. 495; Erichson, Naturg. Ins. Deutschl. iii. p. 278; Horn, Proc. Am. Phil. Soc. xvii. p. 575.

This well-marked genus includes at present about twelve species from the Western Hemisphere, and two European insects. To these we now add seven new species. The reference by Lacordaire of *Ips monilis*, Oliv., to the genus is a mere guess, and does not furnish sufficient evidence that Tropical Africa is included in the area of distribution of this genus. The extremely close resemblance of one of our species—*C. chiriquense*—to the European *C. elongatum* is a point of considerable interest.

1. **Colydium godmani,** sp. n. (Tab. XIV. figg. 26, ♂; 26 *a*, head from in front.)

Robustum, subcylindricum, latum, nigrum, nitidum; antennis pedibusque piceis; prothorace parce punctato, nitido, tristriato, striis lateralibus evidenter abbreviatis; elytris ad basin vix costatis, sed costa secunda ante apicem altissime elevata, interstitiis nitidis tantum subtiliter punctatis.

Long. 10 millim.

Hab. Mexico, Cordova (*Sallé*); Guatemala, Pantaleon, Zapote (*Champion*).

Club of antennæ elongate. Head broad, coarsely punctate; supra-ocular carina almost entirely absent. Thorax shining, the sides straight, just perceptibly narrowed behind, front angles scarcely prominent; along the middle is a fine stria, which does not quite extend to the base or apex, at each side with a still more abbreviated stria. Elytra

shining, only finely punctate; the costæ indistinct at the base, the second very strongly elevated before the apex. Ventral segments shining, rather finely punctured, without any rugosities. Male with long conspicuous hairs on the middle joints of the antennæ.

We have received a dozen examples of this fine and distinct species.

2. **Colydium mexicanum.**

Colydium mexicanum, Reitter, Deutsche ent. Zeitschr. 1878, p. 118[1].

Hab. MEXICO[1], Jalapa, Esperanza, Las Vigas, Amecameca (*Höge*), Jacale (*Sallé*).

This species closely resembles *C. guatemalenum* as well as *C. filiforme*, but is readily distinguished from both by the shining ventral segments, which have only a few transverse rugosities at the sides.

3. **Colydium guatemalenum,** sp. n.

Elongatum, subcylindricum, nigrum, subnitidum; antennis pedibusque rufis; capite prothoraceque fortiter punctatis, hoc tristriato, angulis anterioribus prominulis; elytris costatis, costa secunda ante apicem quam costam primam paulo magis elevata, interstitiis fortiter biseriatim punctatis.

Long. $5\frac{1}{2}$–$7\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote, Capetillo, Guatemala city (*Champion*).

Head rather short; epistome pubescent in front; supra-ocular carina very obscure. Club of antennæ moderately long. Thorax nearly straight at the sides, very slightly narrowed behind; the surface coarsely punctured, with a deep median stria extending from the base to the apex, and on each side a deep lateral stria, extending nearly to the base, and having its outer margin slightly elevated. Elytra with the apical declivity elongate, the costæ well marked; on the middle of the length the first costa is more elevated than the second, but on the declivous part the second is slightly higher than the first. The ventral segments are coarsely strigose-punctate. The male has a very scanty pubescence on the middle of the antennæ. Fifteen specimens.

4. **Colydium chiriquense,** sp. n.

C. elongato persimile. Angustum, subcylindricum, piceum, nitidum; prothorace tristriato, nitido, parce punctato, angulis anterioribus acutis, perparum productis; elytris argute costatis, costis prima et secunda versus apicem æqualiter elevatis.

Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

Head closely, moderately coarsely punctate; supra-ocular carina extremely fine; epistome with long pubescence (in the male). Thorax shining, sparingly punctured; median stria deep, entire, the lateral stria very nearly reaching the base. Elytra with the scutellar stria subobsolete; the first costa evenly elevated from the base to the apex; the sutural costa distinctly elevated at the apex, so that it and the first and second are

about similar at the tip; grooves rather coarsely biseriately punctate. Ventral segments densely strigose-sculptured. Male with some long hairs on the middle joints of the antennæ. One specimen.

The resemblance of this insect to the well-known European *C. elongatum* is very remarkable. The head is narrower in front in *C. chiriquense*, and the supra-ocular carina very fine; besides this, the thorax is rather less sparingly and more coarsely punctate, and the front angles are distinctly, though only slightly, prolonged. *C. chiriquense* is also extremely similar to *C. guatemalenum*, but has the front angles of the thorax less produced, the second costa of the elytra less elevated behind, and the interstices less coarsely punctured. From *C. mexicanum*, the more southern species is readily distinguished by the densely strigose ventral segments.

5. **Colydium puncticolle,** sp. n.

Subcylindricum, minus nitidum, nigrum; subtus piceum, abdomine rufo; capite prothoraceque dense fortiusque punctatis, hoc tristriato; elytris costatis, costis sat alte elevatis, subæqualibus.
Long. 7 millim.

Hab. Mexico, Zacualtipan (*Höge*).

Although we have received only one example of this species, and although it is very similar to *C. guatemalenum*, I entertain no doubt that it is distinct, and will be easily enough identified by the coarse and close punctuation of the thorax. The outer margin of the lateral stria is very strongly raised so as to look like a costa. The first costa of the elytra is strongly raised at the base, and continues evenly so to the apex; the second costa is at the base not quite so strongly raised as the first, but afterwards becomes more elevated, so that on the declivity it is a little higher than the first costa. The sutural costa is more sharply defined than it is in *C. guatemalenum*. The punctuation of the deep grooves is coarse and of the usual nature. The ventral segments are coarsely rugose-sculptured.

The unique specimen is no doubt a female; it has no pubescence on the epistome.

6. **Colydium championi,** sp. n. (Tab. XIV. fig. 27.)

Angustum, cylindricum, nigrum, sat nitidum; prothorace unistriato; elytris ad basin haud costatis, interstitiis secundo quartoque (costis prima et secunda) posterius alte elevatis.
Long. 4 millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ quite short, but with very large club. Head finely punctate, without supra-ocular carina. Thorax very long and slender, almost parallel; anterior angles obtuse; surface rather finely and closely punctate, with a well-marked stria along the middle, but without the usual lateral striæ. Elytra slender, somewhat shining; the normal costæ scarcely to be detected at the base, but the normal first costa very strongly

elevated behind, and the second costa—approximate to it—also rather strongly elevated; interstices rather coarsely punctured. Ventral segments finely, rather closely punctate.

Another very distinct species, of which only one example was obtained.

7. **Colydium pusillum,** sp. n.

Cylindricum, nigrum, sat nitidum; antennis pedibusque rufescentibus; prothorace medio unistriato, striis lateralibus obsoletis; elytris ad basin parum costatis, costis prima et secunda ad apicem sat elevatis.

Long. $3\frac{1}{2}$–4 millim.

Hab. British Honduras, Belize (*Blancaneaux*); Panama, near the city (*Champion*).

Antennæ with large club. Head substrigose-punctate, with a well-marked supra-ocular carina. Thorax but little elongate; anterior angles not produced; surface rather coarsely and closely punctate, with a deep entire median stria and an obsolete and abbreviate lateral one on each side. Elytra shining, with the costæ scarcely visible in front, but rather sharply elevated on the apical declivity; the interstices distinctly punctate. Ventral segments strigose-punctate. Two specimens.

This species is of much less elongate form than *C. championi*, and will be readily distinguished from that species by the well-marked supra-ocular carina, the presence of the lateral lines of the thorax, which are distinct, though obsolete, and by the much less elevation of the second costa behind.

8. **Colydium clavigerum,** sp. n. (Tab. XV. fig. 1.)

Elongatum, subcylindricum, piceum, sat nitidum; prothorace fere estriato; elytris costa secunda posterius altissime elevata.

Long. 6–8 millim.

Hab. Mexico, Villa Lerdo in Durango (*Höge*), Orizaba (*Sallé*).

Antennæ with the club elongate. Head elongate; the eyes long; the epistome feebly emarginate in front; the surface densely punctate. Thorax elongate; sides straight, but a little narrowed behind; anterior angles scarcely at all prominent; the median stria absent, and the lateral stria short and obsolete; the surface coarsely, closely punctate. Elytra with the second costa so strongly elevated behind as to form with its fellow a very deep longitudinal depression, extending more than halfway forwards to the base; interstices coarsely sculptured. Ventral segments shining, aciculate-punctate at the sides.

Of this very distinct species I have seen only two specimens.

AULONIUM.

Aulonium, Erichson, Naturg. Ins. Deutschl. iii. p. 275 (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 573.

The species of this genus—to the number of seventeen—occur in North and South America and in Europe. A Tasmanian insect has also been assigned to *Aulonium*.

1. **Aulonium frontale,** sp. n. (Tab. XV. fig. 2.)

Vertice bituberculato. Oblongum, angustum, minus depressum, ferrugineum, parum nitidum; prothorace sex-sulcato, angulis posterioribus obtusis.

Long. 4–4½ millim.

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*); GUATEMALA, Zapote, Torola (*Champion*).

This is the only one of our species with the vertex bituberculate. Antennæ short, with very broad club. Head short. Thorax elongate, with the two median lines deep, subparallel, but distinctly divergent posteriorly; the intermediate line bounded externally in front by a raised carina, and on the space between it and the median lines there is a short obsolete carina; the outer groove is close to the side. The elytra are feebly punctate-striate, the shoulders not dentiform, the intra-humeral plica excessively short.

We have received only one example from each locality. I am not sure that the one from Mexico really belongs to the same species, as it has the prosternum in front of the coxæ scabrous.

2. **Aulonium belti,** sp. n. (Tab. XV. fig. 3.)

Oblongo-ovale, subdepressum, nigrum, nitidum, antennis pedibusque rufis; prothorace sex-sulcato, sulculis plus minusve evidenter punctatis; elytris fortiter seriatim punctatis.

Long. 7½ millim.

Hab. NICARAGUA, Chontales (*Belt*).

Antennæ red, the club large and stout. Head short, uneven, with a short, fine transverse line on the disc. Thorax much narrowed in front, and with the anterior angles very prominent, shining, finely and sparingly punctured; along the middle with two rather strongly impressed lines composed of not quite connected punctiform impressions; on each side the middle with a similar longer line, and with another groove quite near the side; in propinquity with this latter there is much punctuation, and just within it, about the middle, there is a vague depression; the intermediate line is bounded externally in front by an elevation of the surface carried forwards so as to project and leave a deep emargination of the front just behind the eye; the pair of these carina-like elevations are connected in front by a very broad margin, which is limited behind by a series of coarse punctures; there is a feeble tuberculiform elevation on each side of the middle of the thorax near the front; the hind angles are rectangular. The elytra bear very regular series of large punctures, and the shoulders are minutely dentiform. Under surface very shining, the prosternal process unusually broad.

Only one example of this fine and distinct species was obtained.

3. **Aulonium tubulum,** sp. n.

Angustum, oblongum, minus depressum, nigro-piceum, antennis pedibusque dilutioribus; prothorace sericeo-subopaco, sex-sulcato, sulculis intermediis externe bene carinato-limitatis, sulculis mediis bene impressis,

dorso ante medium utrinque tuberculo parum arguto, obtuse cariniformi, instructo; elytris subtilius seriatim punctatis, plica intra-humerali brevi.

Long. 4–7 millim.

Hab. MEXICO, Villa Lerdo in Durango, Jalapa (*Höge*), Cordova (*Sallé*), Motzorongo (*Flohr*); GUATEMALA, Cerro Zunil, Capetillo, Purula (*Champion*); COSTA RICA, Caché (*Rogers*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

The thorax is elongate and very little narrowed towards the front; the pliciform elevation limiting the intermediate line is strongly elevated and continued to the front, its termination there being only very slightly curved inwards; the two median lines are very definite, diverging but little towards the base, and commencing abruptly a little behind the front margin; about as far forward as their anterior part there is an obscure, elongate, scarcely tuberculiform elevation. The fine fold at the shoulder of the wing-case is quite short.

This species, like the following, is represented in our collections by a good series of specimens; though the two are variable and very closely allied, they can always be distinguished, but small narrow examples of *A. bidentatum* are at first sight difficult to identify.

4. **Aulonium bidentatum.**

Colydium bidentatum, Fabr. Syst. Eleuth. ii. p. 556 [1].

Aulonium bidentatum, Chevr. Ann. Soc. Ent. Fr. 1863, p. 607 [2].

Oblongum, subdepressum, nigro-piceum vel piceo-rufum, antennis pedibusque dilutioribus; prothorace subnitido, sex-sulcato, sulculis intermediis externe vix carinato-limitatis, sulculis mediis leviter impressis, posterius divergentibus, dorso ante medium utrinque tuberculo sat arguto instructo; elytris subtiliter seriatim punctatis, plica intra-humerali elongata.

Long. 4–7 millim.

Hab. MEXICO, Jalapa (*Höge*), Cordova, Toxpam, Vera Cruz (*Sallé*), Motzorongo (*Flohr*), Temax in N. Yucatan (*Gaumer*); BRITISH HONDURAS, Belize, Rio Hondo, Rio Sarstoon (*Blancaneaux*); GUATEMALA, Panima, Tamahu, San Joaquin, and San Gerónimo in Vera Paz, Zapote, Cerro Zunil, Las Mercedes, El Tumbador (*Champion*); NICARAGUA, Chontales (*Belt*); COSTA RICA, Caché (*Rogers*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—SOUTH AMERICA [1]; CUBA [2].

This species and the preceding though very closely allied may, in the series before me, be in all cases distinguished. The diagnoses are drawn so as to express the distinctive characters, which are as follows: the better impressed median lines of *A. tubulum*, which also are less divergent behind; the form of the thorax—more narrowed in front in *A. bidentatum* and with the intermediate cariniform elevation turned more inwards and more tuberculiform on the front margin. In *A. tubulum* the median impression on the front of the thorax is deeper, and the intermediate carina more elevated, while the tuberculiform elevation near the front margin on each side of the middle is elongate

and less distinct. The great majority of the individuals can be distinguished by a glance at these thoracic characters.

I assign as a variety to *A. bidentatum* a few specimens in which the median lines of the thorax are absent; I do so because we have received two or three examples that are intermediate in this respect.

Chevrolat [2] thought it possible that all the American forms of this genus might really belong to one species; but this seems very improbable. Possibly a knowledge of the sexes might throw some light on the subject. I have, however, failed to find any distinctive external sexual characters, and I doubt very much whether the greater development of the thoracic elevations, thought by Horn to be characteristic of the male of *A. longum* and by Sallé [2] of the male of *A. bidentatum*, be really such; because in the series before me there is no apparent line of demarcation between the characters in this respect.

ANARMOSTES.

Anarmostes, Pascoe, Journ. Ent. i. p. 110 (1860).

This genus consists of three or four South-American species. It is misplaced in the Munich Catalogue, where it stands next *Deretaphrus*. It is really very close to *Colydium*, from which it is distinguished by the greater enlargement of the tibiæ towards the apex, and their conspicuous denticulation.

1. **Anarmostes argutus,** sp. n. (Tab. XV. fig. 4.)

Oblongo-subcylindricus, piceus, opacus, antennis rufis; prothorace elytrisque regulariter alte costatis, his intervallis fortiter biseriatim punctatis.

Long. 6–7 millim.

Hab. NICARAGUA, Chontales (*Belt*).

Head indistinctly rugose-punctate; epistome quite rounded at the sides, partly dividing the eyes. Thorax longer than broad, almost parallel-sided, but very little narrowed behind, front angles produced, the side-margins much raised; along the middle are four, very strongly raised, nearly equidistant, costæ, so that the thorax appears sex-costate: all the costæ are strongly raised quite at the front margin; the two median are continued quite to the base, and connected there by a feebly curvate transverse elevation; the lateral costæ extend nearly to the base. Elytra each with three equal sharply raised costæ, and an external fourth one not so strongly raised; the intervals broad, biseriately crenate-punctate. Under surface dull, densely sculptured, the ventral segments with a remarkably developed strigose sculpture.

The two examples obtained of this interesting species are unfortunately in an extremely bad state of preservation. The three South-American species described by Pascoe are all closely allied to *A. argutus*, but all four of them differ by slight characters of form and sculpture.

Subfam. *GEMPYLODINÆ.*

I have recently discussed the characters of this subfamily (Ent. Monthly Mag. xxix. pp. 256, 257); it is distinguished from all the others by the membranous border of the prosternum. The form of these insects is more or less elongate; in those in which it is very long, the prosternum projects beyond the prosternal process, thus giving rise to an arrangement similar to that of *Nematidium*; this was considered by Leconte and Horn to be of a Rhynchophorous nature, but a study of the various forms seems to show that it is correlative with the elongation of these parts of the insect, and differs from species to species.

ENDESTES.

Endestes, Pascoe, Journ. Ent. ii. p. 91 (1863).

This genus consists at present of two South-American species. It is a very isolated form, though I think allied to *Mecedanum* and *Gempylodes*. The prosternum between the coxæ is quite distinct, though narrow, and it does not extend over the coxæ as in *Colydium*, but is immersed between them; behind the coxæ it forms a rhomboidal process closely connected with the tips of the thoracic side-pieces.

Reitter, who described the second species of the genus, thought *Gempylodes* identical with *Endestes*; but this supposition is quite erroneous, though the two have several points in common.

1. **Endestes sculpturatus,** sp. n. (Tab. XV. fig. 5.)

Subcylindricus, niger, antennis pedibusque piceis; fortiter sculpturatus, prothorace medio profunde sulcato; elytris apice retuso, ibidemque interstitiis 2° 4°que costato-elevatis.

Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Pantaleon, Las Mercedes (*Champion*).

Antennæ with the joints preceding the terminal three somewhat enlarged, these latter very loosely connected, so that the antennæ can scarcely be called clavate. Head very closely punctate, with a strongly raised carina extending the whole length of the side. Thorax very long, very convex transversely, front margin straight, the angles not produced; the surface shining black, coarsely punctate; along the middle there extends a broad groove, the sides of which in front are subcostate; there is also in front a slight longitudinal depression outside the costiform elevation. Elytra very coarsely sculptured with series of large punctures separated only by small intervals; the second and fourth interstices become strongly costate at the tip. Under surface coarsely punctate.

Five examples were obtained of this interesting insect. It is extremely similar to the typical species of the genus, except that *E. incilis* has apparently thicker antennæ, formed more after the fashion of *Gempylodes*.

Subfam. *TARPHIINÆ.*

This group is separated from the Synchitinæ by the greater distance between the coxæ, and by the underside of the flanks of the prothorax being more or less hollowed for the reception of the antennal club in the position of repose. Each of these characters shows much gradation, so that it is sometimes almost optional to which of the two groups a genus should be referred: the great majority of the forms I have seen fall, however, readily into one or other of these divisions; and as there is a considerable difference between the two extremes, the recognition of the Tarphiinæ as a distinct group appears to be a useful course. No form of it that I have seen is, however, so uncertain as *Cacotarphius*, which has much in common with *Coxelus*, notwithstanding the difference in the club of the antennæ.

CACOTARPHIUS, gen. nov.

Corpus breve, convexum, hispidum. Antennæ decem-articulatæ, clava uni-articulata. Sulci antennarii breves, imperfecti. Coxæ modice distantes.

Allied to *Cicones* and *Pseudotarphius*; differs from the former by the short broad form and hispid tibiæ, and from the latter by its less widely separated coxæ and slender legs. Epistome very slightly dilated, so that the base of the antenna is but little concealed. Eyes small, convex. Antennary grooves very short, formed almost as in *Cicones*. Anterior acetabula open. Metasternum rather short. Ventral segments very short, the basal one unusually so. Tibiæ slender, narrower towards the tip, armed outwardly with erect setæ, but without apical spurs. Tarsi 4-jointed, with three short, subequal joints and an elongate terminal one.

Although this insect has the facies of the Tarphiinæ rather than of the Synchitinæ yet the two characters that would justify its being considered a member of the former group are each of them very feebly pronounced; the hind coxæ are apparently a little more separated than is usual in the Synchitinæ, but the process of the prosternum between them is apparently acuminate and not truncate. The hollow or excavation of the prosternal flanks is certainly present though very feebly pronounced. Hence the position of the genus must be considered uncertain till further investigation can be made.

1. **Cacotarphius compressus,** sp. n. (Tab. XV. fig. 6.)

Brevis, convexus, niger, antennis tarsisque sordide testaceis; granuloso-rugosus, supra undique setis tenuibus erectis ornatus.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ short, joints 3–9 small, ninth transverse, tenth large, round, quite undivided. Head very short, broad, but only half as broad as the thorax; this latter

strongly transverse, rounded at the sides, with upturned lateral margin studded with erect slender setæ. Elytra short and convex, with very fine crenate striæ; the slender erect black setæ very conspicuous. One example.

Subfam. *PYCNOMERINÆ.*

This appears to be a distinct and natural group. It has been thought by some to be allied to the Bothriderinæ, but there is very little really to connect the two.

In the Pycnomerinæ, the insertion of the antennæ is quite lateral, and the side of the epistome exhibits an incrassation over the articulation; nevertheless, the basal joint is but little concealed; the articulation of the second joint with the first is terminal.

PYCNOMERUS.

Pycnomerus, Erichson, Wiegm. Arch. 1842, 1, p. 214.
Penthelispa, Pascoe, Journ. Ent. i. p. 111.

This is an extensive genus and nearly cosmopolitan. I unite with it at present *Penthelispa*, Pascoe, which was separated solely on the club of the antennæ consisting of two joints; but intermediate forms, in respect of this character, occur.

1. **Pycnomerus truquii.**

Penthelispa truquii, Pascoe, Journ. Ent. ii. p. 39[1].

Hab. Mexico (*Truqui*[1]), Jalapa, Las Vigas (*Höge*), Orizaba, Jacale (*Sallé*); Guatemala, San Gerónimo, Purula (*Champion*).

The undulation of the sides of the thorax is not so conspicuous as the original description might lead one to suppose; indeed in some specimens it can scarcely be detected. We have received a large series, exhibiting considerable variation in size and colour.

2. **Pycnomerus breviceps,** sp. n. (Tab. XV. fig. 7.)

Piceus, elytris pedibusque dilutioribus, depressus; capite brevissimo, antennis crassis; prothorace nitido, fortiter punctato, dorso bi-impresso; elytris sat profunde striatis, striis minus conspicue punctatis.
Long. $2\frac{3}{4}$–3 millim.

Hab. Mexico, Tuxtla (*Sallé*), Jalapa (*Höge*); Guatemala, El Tumbador, Cerro Zunil, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Antennæ short and thick, with a short abrupt club, having a very pubescent apex set also with a few short setæ. Head very short, coarsely punctate, epistome much thickened, disc rather deeply depressed and indistinctly divided into two by a longitudinal

elevation. Thorax slightly longer than broad, a little narrowed behind; front angles not in the least prominent, but rather obtuse; the surface shining, coarsely punctate, the disc largely but vaguely longitudinally impressed, the impression divided more or less distinctly into two parts by a polished longitudinal elevation. Elytra narrow, depressed, with rather narrow striæ and also narrow but flat interstices; the striæ are punctured, the interstice between each two punctures being obscure. Penultimate ventral segment with a slight elevation in the middle behind; terminal segment deeply impressed.

We have received only a small series of this species, but they vary a good deal in the punctuation; the unique example from the State of Panama is remarkably small, and also sparsely punctate, but I can separate it by no good character. Judging from the unique type, *Penthelispa porosa*, Pascoe, is very near *P. breviceps*; but the South-American insect is larger and broader, and has the two impressions on the head separated by a broad space.

3. **Pycnomerus germanus,** sp. n.

Nigricans, elytris pedibusque rufescentibus, minus depressus, nitidus; prothorace irregulariter punctato, medio vage bi-impresso; elytris profunde striatis, striis fortiter punctatis.
Long. $3\frac{1}{4}$ millim.

Hab. Guatemala, San Joaquin (*Champion*).

Antennæ very stout, the termination of the club very distinctly pubescent and setose. Head moderately long, impressed on each side. Thorax about as long as broad, a little narrowed behind, the front margin very feebly sinuate behind the eye; the surface shining, covered with moderately coarse, not crowded punctures, vaguely bi-impressed on the disc. Elytra deeply striate, the striæ impressed with deep, elongate punctures, each of which looks as if formed from a coalesced pair.

We have received only one example of this species; although very similar to *P. breviceps* it is perfectly distinct, the form of the head being different.

Subfam. *ACROPINÆ.*

In the typical genus, this group is very remarkable on account of the prolongation of the sides of the head; in *Ethelema* this occurs, however, only to a slight extent; but the structure of the under surface of the head is different to what it is in the Synchitinæ, so that no doubt the group is a quite natural one.

ACROPIS.

Acropis, Burmeister, Gen. Ins. i. no. 25 (1840).

This peculiar genus has hitherto been known only from the Southern Continent of the New World, where about seven species have been discovered.

1. **Acropis serrata,** sp. n.

Minus elongata, ferruginea, setositate depressa minus dense vestita; elytris in interstitio tertio tuberculis duobus, in interstitio quarto tuberculo singulo minore munitis.
Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Thorax transverse, a little curved and minutely serrate at the sides; the surface rather densely and roughly tuberculate, and with some ochraceous setosity along the middle. Elytra rather short, with regular series of very deep, somewhat coarse punctures, a laterally compressed tubercle on the second interstice in front, a much smaller one on the fourth interstice, and another compressed tubercle on the second interstice just before the declivity; the squamosity is scanty—it consists of some ochraceous scale-like setæ, and some finer, suberect, black setæ, serially disposed, the summits of the tubercles bearing a more condensed black setosity. The legs are reddish, with some fine subdepressed setæ on the outer margins of the tibiæ.

Ten specimens.

2. **Acropis championi,** sp. n. (Tab. XV. fig. 8.)

Fusca, setositate flavescente depressa, minus dense vestita, sat variegata; elytris prope suturam tuberculis tribus in lineam rectam dispositis, exterius tuberculisque duobus; tibiis externe hispidis.
Long. 4 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Head of a dark ferruginous colour, covered with rough, depressed, ochraceous setosity. Thorax much rounded at the sides in front, coarsely rugosely sculptured, bearing scanty ochraceous setosity. Elytra moderately long, dark ferruginous at the base, elsewhere nearly black except for the variegate setosity, the most conspicuous of which consists of two white marks before the apex; they are rough and present distinct series of deep punctures; near the suture there are three elevated tubercles, the hind one the largest, and outside the middle one are two other tubercles. The tibiæ have some minute suberect setæ on their outer face.

We have only received one example of this species. As it marks a more northern extension of this peculiar genus, and is evidently distinct from *A. recta* or *A. serrata*, I have described it. In some respects it appears to be more like the original species of the genus—*A. tuberculifera*—figured by Burmeister; but the setæ on the tibiæ in *A. championi* are quite minute. The number and disposition of the tubercles on the elytra readily distinguish the species from the other two here described.

3. **Acropis recta,** sp. n. (Tab. XV. fig. 9.)

Picea, tomento variegato vestita, elytro singulo prope suturam tuberculis tribus in lineam rectam dispositis.
Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Head densely clothed with pallid ochraceous, or nearly white, depressed squamosity composed of irregularly arranged coarse scale-like hairs. Thorax greatly rounded at the sides; the surface apparently uneven, but covered with squamosity irregularly distributed so as to conceal the sculpture, but there is a well-marked longitudinal depression in the middle in front. Elytra elongate, oblong, covered with much setose squamosity, so as to conceal the sculpture, which, however, consists of quite regular series of moderately large punctures; very near the scutellum there is a large tubercle; just about the middle there is on the second interstice a much smaller tubercle, and behind this, just before the apical declivity, another large tubercle; there is some short, suberect, black setosity on the summit of each of the tubercles. Legs reddish; tibiæ without erect setæ.

ETHELEMA.

Ethelema, Pascoe, Journ. Ent. i. p. 107 (1860).

This genus was established for a single Amazonian species, to which no other has until now been added.

1. **Ethelema sobrina**, sp. n.

Nigra, setositate fusca et albida vestita, minus argute variegata.
Long. $3\frac{1}{2}$–4 millim.

Hab. Mexico, Jalapa, Teapa (*Höge*); Guatemala, San Gerónimo, Chacoj, Torola (*Champion*); Panama, Bugaba, Volcan de Chiriqui 2000 to 3000 feet, David, Tolé, San Miguel in the Pearl Islands (*Champion*).

Head clothed with mixed white and fuscous setosity, which conceals the very dense sculpture. Thorax strongly transverse, feebly denticulate at the sides, clothed with parti-coloured setosity. Elytra clothed in a similar manner, with some more conspicuous white marks on the disc; the setosity quite conceals the sculpture. Legs short; tibiæ clothed externally with adpressed white setosity.

This insect much resembles the figure of *E. luctuosa*, Pascoe; but that species is said to have hairs on the thorax and tibiæ.

2. **Ethelema decorata**, sp. n. (Tab. XV. fig. 10.)

Nigra, albido-rorida, prothorace utrinque nigro-vittato, elytris ad basin nigro-variegatis, tibiis tarsisque testaceis, illis externe albido-vestitis.
Long. 3–$3\frac{1}{2}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui, Tolé (*Champion*).

Black, but covered on the upper surface with short white setæ, giving a grey appearance; the black marks are due not to absence of the scales in certain places, but rather to their being black in colour. Head very broad, regularly studded with minute glistening-white setæ. Thorax strongly transverse, a little narrowed behind, lateral

denticulations very obscure, the surface grey, with a definite black, oblique stripe behind each eye. Elytra clothed with white scale-like setæ, which are extremely minute, and in addition with regularly placed rather larger serial setæ; with four black marks very near the base disposed in a transverse manner, and behind these with a large common black mark very abruptly defined behind; the whole of the basal half of the elytra without marks.

Subfam. *NEMATIDIINÆ.*

In this group we meet with insects of very elongate cylindrical form; the antennæ have a two-jointed club and are retractile, there being grooves for their accommodation near the eyes. The front coxæ are placed a good deal anterior to the hind margin of the prosternum, and this character readily distinguishes the group from the Colydiinæ; the prosternal process is as prominent as the coxæ, and is prolonged behind them. The ciliation of the prosternal hind margin is excessively minute. So far as I know, the group includes only *Nematidium* and an uncharacterized genus from Borneo.

NEMATIDIUM.

Nematidium, Erichson, Naturg. Ins. Deutschl. iii. p. 275, nota (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 576.

Filumis, Reitter, Verh. Ver. Brünn, xiv. p. 16.

This very interesting genus was established for a single species, which has the prosternum behind the coxæ constructed in a different manner from most other Colydiidæ; the prosternal process being prolonged backwards and apparently reposing on and soldered to the apices of the epimera. It has hence been stated that the structure in this respect is that of the Rhynchophorous series. I, however, entertain grave doubts as to the epimera being really joined in the Nematidiinæ, for on carefully cleaning the specimens an appearance of a triangular piece—in addition to the prosternal process—is seen separating two rounded points; an appearance which indicates that the true apices may possibly be themselves separated, but connected by the interposition of a small piece very closely soldered to them.

The typical species, *N. cylindricum*, is said to occur in Brazil and North America, though it has not been found in our region; several others have been subsequently added to the genus. *Filumis tenuissima*, Reitter, is scarcely determinable from the description and figure; the genus was assigned by this latter writer to the Trogositidæ.

1. **Nematidium fryanum,** sp. n. (Tab. XV. fig. 11.)

Valde elongatum, cylindricum, ferrugineum, nitidum, elytris fuscescentibus; capite prothoraceque crebrius sat fortiter punctatis; elytris striatis, ad apicem vix oblique retusis, pone suturam obsolete longitudinaliter impressis; prosterni processu apice depresso, quam prosternum ipsum evidenter breviore.

Long. 9 millim.

Hab. Mexico, Omilteme in Guerrero (*H. H. Smith*).

We have received only one specimen of this remarkable insect; although very similar to the type-species of the genus it is more elongate, and readily distinguishable by the more simple apex of the elytra. It differs also in a still more important character, viz. in the abbreviation of the prosternal process, which evidently does not reach the hind margin of the prosternum. Hence it might perhaps with propriety form a distinct genus.

I have named this interesting insect in honour of Mr. A. Fry, who has kindly entrusted me with his now unique type of *N. mustela*, and thus enabled me to distinguish *N. fryanum* with certainty.

2. **Nematidium viverra,** sp. n.

Elongatum, cylindricum, ferrugineum, antennis pedibusque testaceis; elytris ad apicem breviter oblique retusis, singulo prope suturam longitudinaliter impresso, sutura ipsa ibidem elevata.

Long. 7 millim.

Hab. Guatemala, El Tumbador, Cerro Zunil, Mirandilla, Pantaleon (*Champion*).

Similar to *N. fryanum* in colour and punctuation, but much less elongate, and with a little difference in the structure of the terminal parts of the elytra. The oblique declivity is somewhat short and abrupt, and the striæ entirely cease; but the suture is elevated, and there is a well-marked longitudinal depression on each elytron close to the sutural elevation.

Fourteen examples were obtained of this interesting insect; they show no variation, except in size. This species is extremely close to *N. mustela*, but that insect has the prosternal process slightly impressed, so that its tip is a little deflexed, and the middle of the mesosternum is densely instead of sparingly punctured.

3. **Nematidium filarium,** sp. n.

Elongatum, cylindricum, nitidum, ferrugineum, antennis pedibusque testaceis; elytris ad apicem longius oblique retusis, sutura haud elevata.

Long. 6 millim.

Hab. Guatemala, Calderas (*Champion*); Panama, Volcan de Chiriqui 3000 feet (*Champion*).

This insect resembles *N. fryanum* almost exactly, except that it is much smaller and narrower; it differs, however, strongly by the structure of the prosternal process, which extends to the hind margin of the prosternum, and in this respect agrees with *N. viverra.*

We have received only two examples.

Subfam. *DERETAPHRINÆ.*

Front coxæ slightly prominent, separated only by a narrow band, which is not so prominent as the tips of the coxæ. Hind coxæ moderately widely separated.

With this group we commence the series in which the basal joint of the antennæ is quite exposed at the front of the head (Tab. XV. fig. 13 *a*) when these organs are retracted; the articulation between the first and second joints also is very peculiar. This latter feature is also found in the Bothriderinæ; but the prosternal structure seems to separate the two divisions satisfactorily.

SOSYLUS.

Sosylus, Erichson, Naturg. Ins. Deutschl. iii. p. 288 (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 581.

This genus includes about twelve species; it is doubtful whether *Metopiestes*, Pascoe, can be satisfactorily distinguished from it.

1. **Sosylus terminalis,** sp. n. (Tab. XV. figg. 12; 12 *a*, extremity of the elytra.)

Niger, opacus, minus elongatus, antennis pedibusque piceis; prothorace minus elongato, crebrius punctato, punctis anguste ovalibus; elytris costatis, costa prima ante apicem alte elevata, apice libero, intervallis densissime subtiliter strigoso-punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Zapote (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Bugaba (*Champion*).

The form of the head differs in the two sexes: in each of them it is flat, and has the epistome emarginate, but in the male this peculiarity is much more marked, and there is an elongate channel reaching nearly to the vertex, whereas in the female only the clypeus is so marked; in the male, too, the surface is nearly smooth except near the eyes, whereas in the female it is finely punctate. The thorax has the disc very convex. The first costa of the elytra is very strongly elevated behind, and has just before the apex a free, projecting extremity; the second costa at the same level joins with the third, and the two are continued in a common sharply marked elevation quite to the tip; the intervals are very broad and have no trace of punctuation, but are rendered quite dull by a fine strigose sculpture. The under surface of the head and prosternum of the male are remarkable: the prominent smooth face of the projecting gena is twice as large as it is in the female; the prosternum just in front of the coxæ is prominent, and the prominence is greater in the male and forms a transverse sharply marked line.

A South-American insect determined by the late Mr. Pascoe as being the *Colydium rufipes*, of Fabricius, is probably not specifically distinct from *Sosylus terminalis*. It

appears to me, however, impossible to reconcile Fabricius's brief description with our insect, the most salient point he alludes to being the "thorax lævis," a term totally inapplicable to *S. terminalis*.

2. **Sosylus strigicollis,** sp. n.

Parum elongatus, niger, opacus, capite, antennis pedibusque rufis; prothorace parum elongato, densissime striguloso; elytris costatis, costa prima apice libero, intervallis subtiliter striguloso-sculpturatis.
Long. vix 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

Epistome narrow in front, the margin in the male slightly retuse, so as to appear bituberculate; surface finely punctate. Thorax narrow, moderately elongate, a little narrowed behind, the whole of its upper surface evenly covered with a dense strigose sculpture. Elytra costate, the first costa strongly elevated and quite free at its extremity, the intervals bearing a dense fine sculpture consisting of many minute lines.

This species resembles a small *S. terminalis*, but is very different in the thoracic sculpture and the sexual distinctions. We have received only three examples, two of which have been injured, in all probability by the process of extracting them from their burrows in the wood.

3. **Sosylus simplex,** sp. n. (Tab. XV. figg. 13; 13 *a*, front of the head; 13 *b*, base of the antenna.)

Sat angustus, niger, pedibus piceis, antennis rufis; capite prothoraceque fortiter punctatis; elytris costatis, costis prima et tertia mox ante apicem conjunctis, intervallis punctatis.
Long. $4\frac{1}{2}$ millim.

Hab. MEXICO, Las Vigas (*Höge*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Panzos, Chacoj, and San Juan in Vera Paz, El Reposo, Zapote (*Champion*).

Epistome simple. Head and thorax coarsely and closely punctate, the latter only moderately long, a good deal narrowed behind, the punctuation in front very dense. Elytra distinctly costate, the second and third costæ uniting a little before the tip, and the first and third almost at the tip; the broad intervals bear a distinct, though shallow punctuation.

This seems to be the least rare of our species, and I am not able to distinguish the sexes; the genæ are simple.

4. **Sosylus affinis,** sp. n.

Angustus, niger, subnitidus, pedibus piceis, antennis rufis; capite prothoraceque fortiter punctatis; elytris costatis, costis prima et tertia ad apicem vix conjunctis, intervallis tristriatis, striis integris.
Long. $4\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Chacoj in Vera Paz (*Champion*).

We have received three specimens only of this species, which appears to be structurally very similar indeed to *S. simplex*; but it is a narrower insect, and may be identified by the total absence of punctures on the elytra, these being replaced by three fine lines between each costa. The first costa though very close to the third at the tip is not connected with it.

5. **Sosylus centralis,** sp. n.

Angustus, piceus, opacus, antennis pedibusque rufis; capite prothoraceque subtiliter punctatis, hoc elongato; elytris costatis, intervallis fere esculpturatis, omnium obsoletissime punctatis.

Long. 4–4½ millim.

Hab. MEXICO, Teapa (*H. H. Smith*); GUATEMALA, Coatepeque, Zapote (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Though very closely allied to *S. simplex*, this is an undoubtedly distinct species, the thorax being much longer and quite finely punctate. The epistome is broad in front, subtruncate, with the angles rounded; the whole of the upper surface rather finely punctate. Thorax considerably longer than broad, distinctly narrowed from the middle to the base, very dull, even, covered with rather fine narrow punctures. Elytra very dull, distinctly costate, the costæ strongly elevated behind, the first nearly touching the third before the apex but not joined to it, the intervals very dull and almost destitute of any sculpture.

I do not think there are any well-marked distinctions between the sexes of this species, but we have received only six individuals, so that I may have only one of the sexes before me. The specimens do not quite agree, the one from Teapa being a little larger and black; while the two from Guatemala have the punctuation of the interstices not quite so obsolete. They are so similar that I must consider them all as belonging to one somewhat variable species. *S. duplicatus*, Pascoe, is an allied form having a shorter thorax, and duplicate series of fine punctures on the intervals between the costæ of the elytra.

6. **Sosylus infans,** sp. n.

Angustus, castaneus, subopacus; epistomate parvo, canaliculato; capite subtilissime punctato; prothorace sat elongato, subtiliter crebre punctato; elytris costatis, costa prima ad apicem cum secunda haud conjuncta, intervallis strigoso-sculpturatis.

Long. 3½ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Cerro Zunil, Pantaleon (*Champion*).

Head flat; epistome small, in the female distinctly canaliculate, but in the male very deeply so, in this latter sex bituberculate at the extremity; punctuation dense and very fine. Thorax moderately long, a good deal narrowed behind, finely not densely punctate, the punctures narrow and elongate, but not forming striæ. Elytra costate, the

first costa depressed at its termination, but very distinctly separated from the others; the intervals sculptured with numerous fine entire lines.

We have received five examples only of this species; it differs strongly from *S. centralis* by the sculpture of the thorax. The specimens do not quite agree, but I cannot satisfactorily distinguish more than the one species, the typical examples being those from Cerro Zunil.

7. **Sosylus mexicanus,** sp. n.

Piceus, sat nitidus, capite prothoraceque parce punctatis; elytris costatis, intervallis regulariter sub-bicostatis.
Long. 5 millim.

Hab. Mexico (*Sallé*), Las Vigas (*Höge*).

Epistome simple, rounded in front; head with distant punctures. Thorax moderately long, a good deal narrowed behind, not closely punctured, somewhat shining. Elytra elongate; very distinctly costate, even at the base, the first costa at the apex not uniting with the others; each interval very definitely sculptured with uninterrupted lines, so as to give rise to the appearance of each being almost bi-costate.

We have received two specimens only of this species, each in poor preservation; one of them has more numerous punctures on the head and thorax than the others, but they agree in the specific characters of the very regularly costate elytra with definite lines on the intervals and the simple epistome.

8. **Sosylus strigosus,** sp. n.

Niger, subnitidus, antennis pedibusque piceis; prothorace minus elongato, strigoso; elytris costatis, costa prima ante apicem altius elevata, intervallis minus subtiliter lineato-sculpturatis.
Long. 5 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Epistome rather narrow and elongate, very slightly emarginate in front, the angles acute but deflexed; the whole front of the head finely, very densely, strigose-punctate, dull. Thorax moderately long, closely strigose-punctate, smooth, however, at each side; near the base on each side with a deep obliquely-impressed transverse line. Elytra very distinctly costate, the first costa not united with the others, and the second also free at the tip; the broad intervals are sculptured with very distinct lines, which are very elongate, except that the middle line of each interval is quite broken and irregular.

We have received only one example of this species. It is not very closely allied to any other. The transverse lines at the base of the thorax ally it to the following species.

9. **Sosylus annectens,** sp. n.

Robustus, niger, sat nitidus, antennis extrorsum pedibusque piceis; prothorace minus subtiliter strigoso-punctato; elytris costatis, costa prima ad apicem extensa, intervallis rude substrigoso-sculpturatis.
Long. $6\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Head densely rugose; eyes prominent. Epistome prolonged, its anterior angles acute and curved on to the underside of the head; it is canaliculate along the middle, and does not possess the rugose sculpture of the vertex. Thorax rather short, rounded at the sides and narrowed behind; the disc densely covered with a rather coarse strigose sculpture; a deeply impressed, transversely oblique line on each side near the base. Elytra with the costæ very distinct, the first of them connected at the apex with the apical margin; the intervals broad, each bearing three lines, of which the median is quite irregular, being broken up into short strigosities; on the apical declivity the intervals are free from this sculpture.

Only one specimen was obtained of this remarkable insect. No doubt it is a male, and it is not improbable that the structure of the epistome may be different in the female.

10. **Sosylus salvini,** sp. n. (Tab. XV. fig. 14.)

Major, nigerrimus, nitidus; prothorace parce punctato; elytris costatis, intervallis tristriatis.
Long. 11 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Head short, shining, feebly longitudinally bi-impressed, sparingly punctate; epistome short; eyes large and convex. Thorax moderately long, narrowed behind, very shining, black, remotely punctured. Elytra with the costæ very distinct, the first not connected with the apical margin, but almost touching it; the intervals broad, each marked with three well-separated striæ.

We have received but one example of this fine insect. Prolonged reiterated efforts have quite failed to extend the antenna, and I think it possible that the basal joint is deprived of the usual freedom of motion, and that such movements as may be made usually take place by means of the articulation between the first and second joints.

11. **Sosylus chontalensis,** sp. n.

Piceus, nitidus, prothorace subtiliter sat crebre punctato, angulis obtusis; elytris obtuse costatis, intervallis lævigatis.
Long. $6\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Belt*).

Epistome broad and short, front margin feebly bisinuate, angles distinct. Head finely punctate, the punctures dense on the middle of the upper part. Thorax elongate, narrowed behind; hind angles obtuse, front angles quite rounded; surface finely and

remotely punctate. Elytra with broad costæ, the first abbreviated before the apex, and at its extremity surmouuted with two or three short setæ, the broad intervals quite destitute of sculpture.

This is another extremely distinct species, of which only one example has been obtained. It has the peculiarity that the anterior coxæ are prolonged externally so as to form a short free angle. This peculiarity occurs, though not to so marked an extent, in *S. salvini*, and I have little doubt these two remarkable insects will ultimately form a distinct genus, of which *S. crassus*, Pascoe, may possibly also be a member.

Subfam. *BOTHRIDERINÆ.*

The great separation of all the coxæ is characteristic of this group, and in conjunction with the insertion of the antennæ, and with the absence of the aciculate palpi of the Cerylinæ and Lapethinæ, is sufficiently distinctive.

PROLYCTUS.

Prolyctus, Zimmermann, Trans. Am. Ent. Soc. ii. p. 254 (1869).
Machlotes, Horn, Proc. Am. Phil. Soc. xvii. p. 585 (nec Pascoe).

This genus appears to range from the southern parts of the United States to the southern limits of our region, but I am not acquainted with any South-American species belonging to it. *Machlotes*, Pascoe, may perhaps be retained as distinct with advantage.

These appear, even when met with, to be always rare insects.

1. **Prolyctus dorsalis.**

Prolyctus dorsalis, Reitter, Stett. ent. Zeit. 1877, p. 346 [1].

Hab. Mexico [1], Jalapa (*Höge*, *M. Trujillo*), Esperanza (*Höge*); Guatemala, Mirandilla, Balheu (*Champion*).

If I am correct in my interpretation of Reitter's very brief description, *P. dorsalis* is a species very similar indeed to the North-American *P. exaratus*, but having the margin of the discoidal depression on the thorax less costate-elevate, the elytral costæ rather less elevated, and no trace of any costation or punctuation on the second interval of the elytra. *P.* (*Bothrideres*) *latus*, Pascoe, is extremely similar to *P. dorsalis*, but in it the two median convergent lines on the anterior part of the thorax are entirely wanting.

2. **Prolyctus sculpticollis,** sp. n. (Tab. XV. fig. 15.)

Fusco-niger, opacus, prothorace acute, intricater multicostatis; elytris argute costatis, intervallis omnino esculpturatis.
Long. 5–7 millim.

Hab. Mexico, Temax in North Yucatan (*Gaumer*); British Honduras, Belize (*Blancaneaux*); Guatemala, San Gerónimo, San Joaquin, Zapote (*Champion*).

Thorax strongly rounded at the sides, obscurely punctate, with the costæ very sharply elevated and complex, viz. one parallel with the strongly elevated lateral margin, a short oblique one on the front on each side, and a median pair starting from the front margin, these diverging strongly and surrounding the discoidal sculpture, outside which they become a little rounded and then cease; the discoidal sculpture or shield is divided into two parts by a broad depression, each of the parts being carinate; the basal sculpture is separated from the discoidal by a deep depression, and consists of two short processes with converging and somewhat overhanging carinæ, and between them, in front of the scutellum, a short cariniform tubercle. The elytra have each three sharply elevated costæ, the intervals between which are without sculpture; the sutural interval is a little wider than the others.

Very similar to *P. dorsalis*, but readily distinguished by the acute costiform elevations on the disc of the thorax. From *P. exaratus*, Melsh., to which it is equally similar, it may be separated by the carinate discoidal and basal tubercles of the thorax, and by the absence of all trace of costation on the intervals of the costæ of the wing-cases.

3. **Prolyctus signatus,** sp. n. (Tab. XV. fig. 16.)

Rufescens, subnitidus, subdepressus; prothorace lateribus ante medium subsinuatis, dorso signatura subquadrata, prope marginem lateralem costato; elytris regulariter argute costatis, intervallis lævigatis.

Long. $3\frac{3}{4}$–$4\frac{1}{2}$ millim.

Hab. GUATEMALA, Pantaleon (*Champion*); NICARAGUA, Chinandega (*Sallé*).

Head shining, distinctly punctate. Thorax rather short, a good deal narrower than the elytra, and a little narrowed behind; near the side with a well-marked costa; the elevated lateral margin in front suddenly approximated to this costa, so as to meet it at the front angle, and thus giving rise to the appearance of a sinuous or subangulate outline; on the middle there is a large peculiar mark, subquadrate, and connected with the base by four channels—two, parallel, in front of the scutellum, and one at each corner behind, forming a slender tortuous channel going to the termination of the costa; in front the discoidal mark has a small, less definite, prolongation forwards. Elytra with four regular costæ, the two inner connected at the base; the shoulders with a minute denticle projecting outwards; the intervals flat, polished. Under surface polished, and with opalescent reflections.

Three examples were obtained of this elegant and distinct species; the one from Nicaragua, though darker and larger than those from Guatemala, seems to belong really to the same species.

4. **Prolyctus annectens,** sp. n. (Tab. XV. fig. 17.)

Rufescens, vix opacus; prothorace lateribus subrotundatis, intra marginem costato, anterius utrinque carinula obliqua, dorso signatura magna; elytris regulariter costatis, intervallis planis.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

Although superficially resembling *P. signatus*, this insect is much more nearly allied to *P. dorsalis*, from which it is well distinguished by its much smaller size, rufescent colour, and narrower thorax. The thorax is marked as in *P. dorsalis*, but the discoidal signature is narrower, and in front its lateral margin is a little more prolonged forwards on each side; the two flattened basal tubercles or elevations are approximate, indeed almost contiguous. The sculpture of the elytra is almost exactly as in *P. dorsalis*.

Only one example was found.

LITHOPHORUS, gen. nov.

Antennæ articulo ultimo parvo, in articulo decimo quasi recepto. Oculi haud prominuli. Pedes omnes distantes. Abdomen absque lineis longitudinalibus.

The insects of this genus have the characters common to *Prolyctus* and *Bothrideres*, but differ from both in form and sculpture, also from the former in the absence of the so-called coxal lines on the first ventral segment, and from *Bothrideres* in the form of the head, the eyes not being prominent, but placed quite near the thorax. The tibiæ are remarkably broad, and are denticulate externally.

Judging from the description, the Antillean *Prolyctus gemmatus*, Reitter, will prove to belong to this new genus. It has, like the species here described, the peculiarity of bearing a sort of jewel set in the middle of each rough elytron.

1. **Lithophorus gemmifer,** sp. n. (Tab. XV. fig. 18.)

Elongatus, nigricans, supra opacus, rugoso-tuberculatus; prothorace perinæquali, anterius utrinque costa elevata; elytro singulo medio bigemmato.

Long. 6–8 millim.

Hab. Mexico, Jalapa (*Höge*).

Antennæ piceous; head scarcely half as broad as the elytra. Thorax oblong, nearly straight at the sides, much narrower than the elytra; the surface very uneven, without lateral margin, a strongly raised costa extending on each side of the middle from the front margin backwards nearly half the length of the thorax; on the middle, extending backwards, a longitudinal depression terminated behind by an abrupt, almost furcate, elevation; on each side of this latter a deep irregular fovea; at the sides near the middle are two acute tubercles; there is no visible punctuation, but a scanty glistening flavescent setosity is present. Elytra elongate, striate; the third interstice from the suture set with a series of compressed tubercles, the fifth also tuberculate; each of these interstices bears on the middle a translucent yellow tubercle looking like a jewel or piece of fine amber; the outer portions bear some smaller tubercles. Under surface coarsely punctate, but shining. Four specimens.

2. **Lithophorus succineus.**

Bothrideres succineus, Pascoe, Journ. Ent. i. p. 108, t. 5. fig. 3 [1]; ii. p. 93 [2].

Elongatus, niger, opacus, elytris longitudinaliter tuberculatis, singulo medio bigemmato.
Long. 3–5½ millim.

Hab. MEXICO, Paso de San Juan in Vera Cruz (*Höge*); GUATEMALA, El Tumbador, El Reposo (*Champion*).—AMAZONS, Ega [2], Pará [1]; BRAZIL, Rio Janeiro [1 2].

Antennæ piceous, terminal joint almost invisible. Head very coarsely punctate. Thorax narrow, oblong, its surface rather uneven; on the middle is a narrow rhomboidal depression continued forwards as a faint channel, and also prolonged as a channel behind till arrested by a small elevation; outside this latter there is a short tortuous channel, on each side a sharp tubercle. Elytra long and narrow; suture depressed and flat; the third and fifth interstices costate, the costæ, however, interrupted and irregular, each of them in the middle with a small translucent piece like a jewel or fine amber; the outer parts with numerous rough tubercles or denticles. Under surface coarsely punctured, dull. Legs long.

Although similar to *L. gemmifer*, this insect is easily separable by the different sculpture of the thorax. The example found at El Reposo, though only half the normal size, seems really to belong to the same species.

In his comments on *B. succineus* Pascoe pointed out [2] that it should probably form a new genus.

BOTHRIDERES.

Bothrideres, Erichson, Naturg. Ins. Deutschl. iii. p. 288 (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 586.

This is apparently one of the most widely distributed of the genera of Colydiidæ, and is likely to prove rich in specific forms. About forty species have been described up to the present time.

1. **Bothrideres setiger,** sp. n. (Tab. XV. fig. 19.)

Elongatus, supra deplanatus, ferrugineus, piliferus; prothorace fortiter punctato, lateribus in medio denticulatis, dorso vage impresso; elytris interstitiis inæqualibus, alternis fere costiformibus.

Hab. GUATEMALA, near the city, Capetillo, Zapote, Cerro Zunil (*Champion*).

Var. minor, pallide ferrugineus.
Long. 2½–3¼ millim.

Hab. GUATEMALA, near the city, Capetillo (*Champion*).

Thorax subquadrate, but distinctly narrowed behind, the front angles not produced but minutely acute; the sides with a well-marked denticle in the middle; the surface coarsely punctate, the disc with a vague elongate impression, which is slightly deeper at its commencement and termination, the intervening space being usually

smooth; on the front margin there is also a smooth space. Elytra rather elongate, flat, a little narrowed behind, deeply striate; the interstices very unequal in width, the broader of them serially punctate, the narrower resembling costæ, but not more elevated than the others; the shoulders are a little rounded, and, curving inwards, project a little at the base. Under surface very shining, sparsely punctate.

This is apparently a very variable species in size, and also, though to a less extent, in colour and in the punctuation of the thorax and elytra. The unique type of *B. simplex*, Pascoe, is extremely closely allied, but has a broader thorax, and the interstices of the elytra are less unequal, the alternate ones being, therefore, not like costæ.

2. **Bothrideres depressus,** sp. n.

Piceus, depressus, sat nitidus, piliferus; prothorace medio denticulato, dorso obsolete impresso; elytris striatis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Mirandilla, Pantaleon (*Champion*).

Very closely allied to *B. setiger*, but readily distinguished by the comparatively slight inequalities of the alternate interstices of the elytra. *B. depressus*, also, is darker in colour and more depressed in form. The thorax is very coarsely punctate, the disc vaguely depressed; a larger puncture or fovea exists at the basal part of the depression; there is a smooth space on the front margin. The elytra are flat, rather long, and distinctly striate, the striæ being punctured; the interstices are a little unequal, the alternate ones being slightly narrower, but not costate; the broader interstices are seriately punctate, but there are no punctures on the first, third, and fifth interstices. Under surface flattened and polished, with distant very distinct punctures (closer towards the extremity) and scanty setosity. Four specimens.

3. **Bothrideres parvulus,** sp. n. (Tab. XV. fig. 20.)

Testaceo-ferrugineus, subopacus, subtiliter setosus, elytrorum limbo setis erectis ornato; prothorace medio quadratim-impresso, impressione longitudinaliter divisa; elytris interstitiis alternis costatis.
Long. $1\frac{1}{2}$–$1\frac{7}{8}$ millim.

Hab. GUATEMALA, El Reposo (*Champion*).

This minute *Bothrideres* is of short form, and very distinct on account of the costate elytra. The antennæ are small, but the club is large. The head is obsoletely punctate, feebly longitudinally bi-impressed. The thorax is quadrate, but a little narrowed behind; the angles are obtuse; the surface is densely obscurely punctate, with a large depression on the disc, in which there is a longitudinal elevation; there are also two short obscure longitudinal elevations in front of the scutellum. The elytra are short; the alternate interstices are elevated so as to form costæ, the outer one continued ehind so as to form, with its fellow, a continuous margin to the apical part of the body; and the margin of the after-body in front has very distinct outstanding setæ. Under surface minutely setose, very obsoletely punctate.

4. **Bothrideres solitarius,** sp. n.

Haud depressus, ferrugineus, capite prothoraceque fuscescentibus, setosus; prothorace subquadrato, dorso impresso medio ante basin profunde foveolato, basi bidenticulata; elytris setis erectis armatis.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Head rather closely and coarsely punctate, setose; club of antenna large. Thorax quadrate, coarsely punctate, setigerous, with a large depression on the middle, and behind it a very definite round fovea; on each side of this there is, as it were, a very slight elevation directed backwards, so that in profile the base appears bidenticulate; the hind angles are rectangular, minutely prominent. Elytra moderately elongate, subcostate; the alternate interstices setose, the outer one armed with distinctly erect setæ. Legs rather short.

Only one example was received of this species; it is, perhaps, nearest to *B. parvulus*.

5. **Bothrideres subvittatus,** sp. n.

Angustus, haud depressus, parce setosus, nigricans; antennis rufis; pedibus elytrisque rufo-obscuris, his ad suturam sæpe nigricantibus; prothorace dorso bifoveolato.
Long. $2\frac{1}{4}$–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, near the city, Zapote (*Champion*).

Antennæ red; club large. Thorax rather longer than broad, a little narrowed behind, convex; angles obtuse, coarsely punctate, with two large foveæ—one in front of, the other behind, the middle. Elytra finely seriately punctate; the sutural interstice with fine distant punctures, the first interstice outside this polished, without punctures; the second and fourth interstices punctate, the third and fifth impunctate. The polished interstice becomes broader and deeper at the apex, and is set on its deepest apical part with some transverse impressions or coarse rugosities.

This species should perhaps be separated to form a distinct genus, as the front coxæ are only half as widely separated as they are in the normal *Bothrideres*.

TAPHRIDERES, gen. nov.

Coxæ anteriores haud depressæ, parum distantes.

The insect for which I establish this genus has the appearance and most of the characters of the narrow species of *Bothrideres*, but the front coxæ are still more approximate in *Taphrideres*; moreover, the front coxæ are not so very deeply inserted as they are in *Bothrideres*, and thus the prosternal process appears somewhat depressed between them. So far as the prosternal process is concerned, *Taphrideres* therefore connects *Bothrideres* with the more ordinary forms, in this respect, of Colydiidæ.

1. **Taphrideres alternans**, sp. n. (Tab. XV. fig. 21.)

Niger, haud depressus, tenuiter setosus, nitidus; antennis rufis, pedibus piceis; prothorace ante basin in medio profunde foveolato; elytris subtiliter seriatim punctatis, interstitiis primo, tertio, quinto lævigatis, alternis setigeris.

Long. 4–4½ millim.

Hab. GUATEMALA, El Tumbador, Las Mercedes, Cerro Zunil (*Champion*).

Antennæ obscure red, stout. Eyes large, convex, placed near the thorax. The latter rather elongate, much narrower behind; the sides rounded in front; the anterior angles acute; there is no lateral margin, except at the sides behind, where there is a short elevated plica; in front of the base in the middle there is a very deep fovea; the surface is coarsely punctate, but shining, and very distinctly setigerous. Elytra with the second and sixth interstices prominent at the base; the sculpture consists of series of fine, setigerous punctures, and a similar but still finer punctuation of the interstices, the alternate interstices being, however, smooth; the first interstice becomes depressed at the apex, and is there slightly transversely plicate. Under surface shining, with fine scanty hairs. This species is apparently confined to the Pacific slope.

Subfam. *CERYLINÆ*.

In this group the antennæ have their insertion exposed from the front, and the terminal joint of the palpi is very minute and aciculate. The subfamily Cerylinæ comprises a considerable number of genera, which require a careful study, as the gradations in the minor points of structure appear to be numerous. All are small or minute Colydiids.

CERYLON.

Cerylon, Latreille, Hist. Nat. Crust. et Ins. iii. p. 205 (1807); Erichson, Naturg. Ins. Deutschl. iii. p. 293.

This genus is very widely distributed, but only three or four species have been described from the Western Hemisphere.

1. **Cerylon curtipes**, sp. n.

Depressum, breve, castaneum, nitidum, fortiter punctatum; elytrorum seriebus externe et versus apicem carentibus.

Long. 2 millim.

Hab. MEXICO, Motzorongo (*Flohr*); GUATEMALA, San Gerónimo (*Champion*).

Antennæ short; club rather small. Eyes very prominent. Thorax broader than long; front angles very little produced; hind angles rectangular; disc coarsely punctate; basal impressions absent. Elytra with six series of coarse punctures, the sides and apex smooth. Legs short; tibiæ dilated and rounded externally towards the apex, each bearing two long, very fine setæ.

This is one of the smallest insects of the genus; the legs are shorter than usual, and the two long outstanding setæ on the tibiæ seem to be peculiar to it. We have received only one specimen from Mexico, but Mr. Champion procured a fair series at San Gerónimo.

PHILOTHERMUS.

Philothermus, Aubé, Ann. Soc. Ent. Fr. 1843, p. 93; Erichson, Naturg. Ins. Deutschl. iii. p. 292; Horn, Proc. Am. Phil. Soc. xvii. p. 589.

This genus at present is scarcely satisfactorily distinguished from *Cerylon*. Horn separates it chiefly on account of the open anterior acetabula; but this important character has not been examined by other describers, who have contented themselves with separating the two genera by means of a difference in the antennal club. Hence it is quite uncertain whether some of the species that have been treated as belonging to *Cerylon* should not rather be placed in *Philothermus*. In the present work I have made use of the ordinary mode of separating the genera, as the material before me is not sufficient to enable me to examine the acetabula in a satisfactory manner.

The genus is not numerous in species at present, scarcely a dozen having been described; but they come from widely separated parts of the world.

1. **Philothermus politulus**, sp. n.

Brevis, piceus, sublævigatus, antennis pedibusque rufis; prothorace pernitido, elytrorum seriebus punctorum valde abbreviatis.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Antennæ small; club rather indistinctly divided. Thorax short, highly polished, with some rather large punctures on the middle behind; front angles deflexed, very little prominent; there is an extremely fine lateral margin. Elytra with three or four series of punctures, the sutural one entire, the others abbreviated.

We have received one example only of this distinct little species. Though looking exactly like a *Cerylon*, it seems that it must at present be placed in *Philothermus*.

2. **Philothermus gibbulus.**

Philothermus gibbulus, Reitter, Deutsche ent. Zeit. 1876, p. 303[1].

Hab. MEXICO, Teapa (*Mus. Deyrolle*[1]).

We have not received a specimen of this species. It is said to be a very small convex insect, with scarcely visible thoracic margin. It would from this appear to be nearest to *P. politulus*.

3. **Philothermus cerylonicus,** sp. n.

Angustus, parallelus, depressus, ferrugineus, nitidus, antennis pedibusque testaceis; prothorace parce punctato; elytris seriebus punctorum versus apicem et ad latera carentibus.
Long. $1\frac{1}{3}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ small; club elongate, rather indistinctly divided. Thorax about as long as broad; front angles rounded, not produced; sides straight; the surface finely punctate. Elytra rather long, with series of fine punctures, which become obsolete towards the extremity and are absent from the sides; the sutural stria extends to the apex. Legs rather short.

This is, perhaps, the smallest insect of the whole family. It is exactly like a *Cerylon*, but the antennal club is as distinctly divided as it is in the type of *Philothermus*.

4. **Philothermus marginatus,** sp. n.

Piceo-castaneus, nitidus; antennis pedibusque testaceis; prothorace parce punctato, tenuissime pubescente, crasse marginato; elytris seriebus punctorum abbreviatis.
Long. 2 millim.

Hab. Mexico, Omilteme (*H. H. Smith*); Guatemala, Capetillo, Zapote, Cerro Zunil (*Champion*).

Antennæ short; club elongate, distinctly divided. Thorax rather strongly transverse, with the lateral margins very distinct; the hind angles well marked, almost acute; the surface very shining, with distant coarse punctures and a very few extremely fine hairs. Elytra very shining, with distinct series of remote punctures, none of them extending to the apex. Tibiæ slender.

A North-American insect in Pascoe's collection labelled "*Cerylon testaceum*, Say," is closely allied to *P. marginatus*.

5. **Philothermus puberulus.**

Philothermus puberulus, Schwarz, Proc. Am. Phil. Soc. xvii. p. 361[1]; Horn, t. c. p. 590[2].

Hab. North America, Florida[1 2], Arizona[2].—Mexico, Jalapa (*Höge*), Motzorongo (*Flohr*); Guatemala, Las Mercedes, Zapote, Capetillo, San Gerónimo (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

The small series we have received of this species shows it to be somewhat variable in form and in the coarseness of the sculpture, but I am unable to see any good characters for separating the specimens.

Schwarz[1] records it as having been found under the bark of *Pinus palustris*.

Subfam. *LAPETHINÆ.*

This subfamily as at present constituted is somewhat doubtfully distinct from the Cerylinæ, and consists only of a few small insects from the New World. All are more convex insects than is usual in the Colydiidæ.

The Lapethinæ are distinguished from the Mychocerinæ by the prosternum having the chin-piece separated from the flanks by a deep fissure and by the aciculate palpi. Besides this, there is a want of agreement in many details. Although the *Cerylon* alliance is quite clear in Lapethinæ, I find little to indicate its existence in *Mychocerus pilifer*, Lewis.

LAPETHUS.

Lapethus, Casey, Ann. N. York Acad. v. p. 317 (1890).

I think I am correct in referring to this genus a small insect found by Mr. Champion in Central America; but I have some doubt about it, as Casey says "pronotum [no doubt in error for prosternum] widely separating the small globular coxæ": in the Guatemalan insect the front coxæ are moderately distant, the prosternum projecting beyond them in the form of a rounded prosternal process.

In establishing the genus *Lapethus*, Casey referred it to the Murmidiinæ, where it was by him associated with *Murmidius* and *Mychocerus*. If we are in this country right as to the insects we assign to *Lapethus* and *Mychocerus* the two are by no means closely allied, neither is there any very near relationship between *Mychocerus* and *Murmidius*. As our *Lapethus* and *Mychocerus* do not at any rate enter the same subfamily, and as *Mychocerus* has already been dealt with in this work as an aberrant member of the Histeridæ (*anteà* p. 244), it is unnecessary for me here to discuss the question further.

1. **Lapethus discretus.** (Tab. XV. fig. 22.)

Lapethus discretus, Casey, Ann. N. York Acad. v. p. 318[1].

Hab. North America, California[1].—Guatemala, San Gerónimo, El Jicaro (*Champion*); Panama, Volcan de Chiriqui (*Champion*).

We have received six examples only of this species. The pair found by Casey in California were obtained from under old bark, near Humboldt Bay. Our individuals agree with Casey's description, though he remarks that the thorax has the sides margined with a "thick acute bead." In our example the sides of the thorax are finely margined.

LYTOPEPLUS, gen. nov.

Corpus ovatum, nudum; prothorace ad elytra et ad mesosternum arcte applicato. Antennæ octo-articulatæ clava ovata, uniarticulata. Coxæ omnes late distantes; prothorace anterius utrinque fovea elongata. Tarsi subtus ad basin longe setosi.

This genus is closely allied to the preceding (*Lapethus*), but is distinguishable by the

greater separation of the front and middle coxæ, and by the accurate co-adaptation of the hind portion of the prosternum in the middle and the front of the mesosternum. The head is very retractile, so that it can be, in repose, almost entirely withdrawn into the thorax. The club of the antenna has no visible sutures, but it looks as if it might be composed of three joints—an appearance due to the arrangement of the pubescence. The hind margin of the prosternal process is gently curved; it is not received into any cavity of the mesosternum. The mesosternum has between the coxæ an exposed portion brought up to the level of the metasternum; in front of this it is perpendicular, and then again is continued forwards horizontally; thus it forms a sort of step—like the step of a stair; the front edge of its posterior part is wider than the prosternal process, but has a corresponding curvature, and this curvature the edge of the prosternal projection reposes against. The hind coxæ are rather large, and the abdominal process behind them exhibits a quite straight transverse truncature in front. The basal three joints of the tarsi are short, and from the first of them there projects a long delicate pencil of two or three hairs.

1. **Lytopeplus compactus,** sp. n. (Tab. XV. fig. 23.)

Ovatus, piceo-ferrugineus; antennis pedibusque testaceis; prothorace polito, parce obsolete punctato, sublævigato; elytris seriebus abbreviatis punctorum.

Long. 2–2¼ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Head very obsoletely punctate; eyes very small, but prominent. Antennæ with oval club, the base of which is glabrous; then there is a band of pubescence, while the apex is largely pubescent and bears several long setæ. Thorax much narrowed in front, very definitely but finely margined at the sides; the base very feebly broadly lobed in the middle; the surface with a few fine distant punctures, and also very delicately alutaceous. Scutellum distinct, small. Elytra with series of rather fine punctures, which are absent from the sides and apex; the surface shining, but when cleaned and viewed with a high power found to be studded with excessively minute, remote, erect setæ. Legs slender; under surface almost impunctate. Our specimens of this species were found under the bark of pines.

Subfam. *DISCOLOMINÆ.*

This little group is characterized by the three-jointed tarsi and by the exposed insertion of the antennæ. Some of the Tarphiinæ have likewise three-jointed tarsi, but in them the insertion of the antennæ is concealed. The palpi are, I believe, very varied in their development in this small group, which consists of three genera only, viz. *Discoloma*, *Holophygus*, and *Notiophygus*.

DISCOLOMA.

Discoloma, Erichson, Naturg. Ins. Deutschl. iii. p. 292 (1845); Horn, Proc. Am. Phil. Soc. xvii. p. 556.

This peculiar genus includes four or five South-American species, and Reitter has recently added another from Guinea.

The structure of the metasternum and base of abdomen is very peculiar in this genus. Horn called attention to the fact that the hind coxæ are widely separated from the epimera, and he supposed that the two parts did not articulate. On dissecting off the abdomen it is, however, seen that the superficial appearance is completely deceptive; the posterior coxæ are really large, and the posterior part of the middle of the metasternum is turned upwards at right angles, and is in this manner concealed; the apical angle of the epimeron is curved upwards and inwards, and thus the normal articulation with the outer portion of the coxa occurs, though quite concealed from observation made without the aid of dissection.

1. Discoloma vestitum.

Discoloma vestita, Pascoe, Journ. Ent. ii. p. 99[1].

Hab. Mexico[1], Cordova (*Sallé*), Jalapa, San Juan Bautista (*Höge*), Motzorongo (*Flohr*), Yucatan (*Sallé*); British Honduras, Belize (*Blancaneaux*); Guatemala, San Juan, Tamahu, Senahu, and Cahabon in Vera Paz, Capetillo, Cerro Zunil (*Champion*); Nicaragua, Chontales (*Janson*).

This is apparently a common insect in parts of our region, and varies but little. It is extremely close to a South-Brazilian insect, but this latter has a shorter, rather more scanty pubescence.

2. Discoloma cassideum.

Thireosoma cassideum, Reitter, Verh. Ver. Brünn, xii. p. 8[1].
Discoloma cassideum, Reitter, Deutsche ent. Zeit. xxi. p. 176 (1877)[2].

Hab. Mexico[1 2].

When Herr Reitter originally described in a very few words[1] this supposed new species, he was not aware that these insects had been previously studied by Erichson and Pascoe; and it appears probable, therefore, that his *T. cassideum* is the common Mexican *Discoloma*, which, indeed, is the only one of the genus known to me as occurring there. Since, however, the Austrian savant has returned to the consideration of the genus, and in a brief—and I must add unsatisfactory—table has given *Discoloma vestitum* and *D. cassideum* as distinct species, I follow him till a comparison of his type shall have settled the point.

3. **Discoloma humerale.** (Tab. XV. fig. 24.)

Subcirculare, depressum, fuscum, limbo ferrugineo; subtilissime punctulatum, pube erecta evidenter vestitum. Long. 3 millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Club of antenna longer than broad, its extremity quite truncate. Thorax almost impunctate. Elytra with the expanded margins very broad, reddish in colour, the disc being fuscous; the red colour extends inwards at the shoulder, forming a humeral mark; the punctuation is fine and not dense; the explanate margins are marked off from the body by a very conspicuous series of large punctures, but there is no trace of other large punctures.

We have received only two examples of this species; it appears to be quite distinct from *D. vestitum*.

4. **Discoloma circulare,** sp. n.

Subcirculare, depressum, fuscum; subtilissime punctulatum, pube erecta evidenter vestitum. Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This insect is very closely allied to *D. humerale*, but is unicolorous, and has the punctuation and pubescence rather finer and more dense.

Both species are well distinguished from *D. vestitum* by the broader explanate margin, and the entire absence of larger shallow punctures on the disc.

HOLOPHYGUS, gen. nov.

Corpus rotundatum, subconvexum. Antennæ 10-articulatæ; clava uniarticulata. Coxæ omnes minutæ, sat distantes.

Antennæ inserted on the front of the head, the basal joint incrassate, the terminal one forming a long slender club. Mouth placed at the front of the head, but quite beneath. Eyes small, very convex, finely facetted. Prosternum short; front coxæ distinctly but not widely separated; acetabula closed. Mesosternum prominent in front of the middle coxæ, which are moderately distant. Metasternum short. Hind coxæ minute, globose, not very widely separated; more distant from the lateral margin of the abdomen than from one another. First ventral segment as long as the two following segments together. Epipleuræ very broad. Legs slender; tibiæ quite simple, without spurs. Tarsi 3-jointed, second joint small.

There can be no doubt that this genus is allied to *Discoloma*, although the appearance is so different. The unique specimen has been injured, and has the point of the prothoracic side-piece broken off on one side, thus rendering the corresponding acetabulum open.

In addition to the two genera of our fauna the only other member of the subfamily Discolominæ is the South-African genus *Notiophygus*. The insects forming it have a

very different appearance from *Holophygus*, yet the two genera are apparently very closely allied structurally. *Notiophygus* has, however, very thick maxillary palpi, while the parts of the mouth in *Holophygus*, so far as I can see them, apparently differ but little from those of *Discoloma*.

1. **Holophygus celatus,** sp. n. (Tab. XV. fig. 25.)

Subrotundatus, sat convexus, fuscus, limbo rufescente; antennis pedibusque flavis; opacus, breviter parceque hispidulus, limbo subtuberculato.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Club of antenna elongate and slender. Head small, deeply inserted in the thorax; this latter broad and short, very greatly narrowed in front. Scutellum extremely short. Elytra as well as the thorax coarsely, quite irregularly punctured, and studded with distant, very short, thick, erect setæ; the margins of the thorax as well as those of the elytra are so formed as to give an undulated outline to the insect, the projections on each wing-case being seven in number.

Of this curious little insect only one specimen was obtained, and it, unfortunately, has been somewhat injured, probably in connection with its capture.

Fam. RHYSODIDÆ*.

According to the Catalogue recently made of these anomalous insects by Mr. Geo. Lewis, forty-one species are at present known. One only has been previously recorded from our region, and I now add a second discovered by Mr. Champion in Guatemala.

CLINIDIUM.

Clinidium, Kirby, Zool. Journ. v. p. 6 (1829).

This genus, consisting at present of sixteen species, has an extremely wide distribution in both hemispheres. *C. guatemalenum* is found under the bark of pines.

1. **Clinidium mexicanum.**

Clinidium mexicanum, Chevr. Ann. Soc. Ent. Fr. 1873, p. 214[1].

Hab. MEXICO, Jacale (*Sallé*[1], *Truqui*), Cordova (*Sallé*), Omilteme in Guerrero (*H. H. Smith*), Las Vigas, Esperanza, Amecameca, Toluca (*Höge*).

2. **Clinidium guatemalenum,** sp. n.

Angustum, nigro-piceum, nitidum; prothorace lateribus bisulcatis, dorso profunde sulcato, basi utrinque foveolata, foveolis longe antrorsum prolongatis; elytris sulcatis, interstitiis minus argute crenatis.

Long. 7–8 millim.

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* By D. SHARP.

Hab. GUATEMALA, Santa Cruz near San Gerónimo, Quiché Mountains 7000 to 9000 feet, Totonicapam 8500 to 10,500 feet (*Champion*).

Although very similar to *C. mexicanum*, this insect belongs to a different section of the genus, owing to the thorax having two grooves instead of one at the sides.

The antennæ are only moderately stout, their exserted setæ very distinct. Head with two channels converging to form a single depression behind, which is so deep as almost to make the vertex appear bilobed. Thorax very long, very highly polished; the dorsal channel very deep; the foveæ remarkably elongate, so that they do not entirely disappear until somewhere near the middle of the length. Elytra with the shoulders prolonged in front, very deeply sulcate, the interstices having their outer margin somewhat undulatory; the scutellar depression very deep. Male with a small acute denticle on the front femora; the tibia with a small acute tooth on the inner margin above the middle; the spurs at the apex of the middle tibia turned more inwards than they are in the female; those at the apex of the hind tibia directed inwards, and placed on a small prolongation.

Fam. CUCUJIDÆ *.

This family at present includes upwards of 300 species, and is represented in all parts of the world. About 140 have been discovered in our region, and upwards of 100 of them appear to be new. I have to thank M. A. Grouvelle, of Paris, who has devoted a great deal of attention to this family, for his kindness in examining a series of our species of *Læmophlæus* and Silvaninæ, and communicating to me his views thereon.

The family Cucujidæ is one as to the affinities and classification of which considerable diversity of opinion exists. The sexes in some cases display an inexplicable difference in the number of joints on the hind feet, which is subject to be one less in the male than it is in the female. In other cases the feet are similar as to the number of joints in the two sexes, but exhibit a generic difference in this respect, being in some cases all 4-jointed, in others all 5-jointed. Hence the family includes a much greater diversity in tarsal structure than is usual in the families of Coleoptera. The antennæ are sometimes of the typical Clavicorn structure, while in other cases they have no trace of a club. In some forms the anterior acetabula are closed behind, while in others they are open.

While so much variety is exhibited within the limits of this small family, it is at the same time very difficult to separate it from certain other families, *e. g.* Cryptophagidæ, Erotylidæ, and Monotomidæ. In fact, the classification of this portion of the Coleoptera will have to be remodelled. Captain Casey has already made various propositions to this end, but in the case of our limited fauna I have not felt justified

* By D. SHARP.

in making any radical alterations. I have, however, intimated in the following pages that the Rhizophaginæ should be brought into the Cucujidæ; that *Hemipeplus* should be removed from the family to the Heteromerous series; and I may here add that several genera, that will be placed in our pages in Monotomidæ, in conformity with the views of Leconte and Horn, should also be brought into the Cucujidæ, to be placed near Rhizophaginæ.

The characters made use of for defining the subfamilies of Cucujidæ have not been happily selected by Erichson and his successors, and I have been compelled to establish a new subfamily, Ancistriinæ.

Subfam. *PASSANDRINÆ.*

In this subfamily the anterior coxal cavities are open; the basal joint of the feet is extremely short, so that the tarsi appear only 4-jointed; and the sides of the under surface of the head are prolonged so as to cover the maxillæ.

The North-American genus *Scalidia* is unknown to me *; it will probably prove to be a member of the Ancistriinæ, and not of Passandrinæ, where it is placed by Leconte and Horn.

PASSANDRA.

Passandra, Dalman, in Schönh. Syn. Ins., App. p. 146 (1817).

This is a genus of some eight or ten species, and is of very wide distribution, though limited to the warmer regions of the world.

1. Passandra fasciata.

Passandra fasciata, Gray, in Griffith's Anim. Kingd., Ins. ii. p. 93, t. 60. fig. 2, and t. 75. figg. 2 *a–d* (as *Parandra*) (1832)[1]; Newm. Ann. Nat. Hist. (1) ii. p. 391 [2].

Hab. MEXICO, Cordova (*Sallé*), Jalapa, Bobo (*Höge*), Yucatan (*Sallé*), Temax in N. Yucatan (*Gaumer*); GUATEMALA, Pantaleon (*Champion*); NICARAGUA, Chontales (*Belt*).—COLOMBIA, Cartagena [1]; ANTILLES, Cuba [2].

This appears to be a rare insect, most of the localities having yielded only one or two examples. Höge, however, procured a small series at Bobo, and this suggests that the considerable variation the species exhibits in size and colour may be to some extent geographical.

CATOGENUS.

Catogenus, Westwood, Zool. Journ. v. p. 221 (1835).

This genus comprises about twelve species, and is confined to the New World, with the exception of one representative found in S. Africa; this I have not seen.

* Unless, as I have suggested in the following pages, when dealing with *Syssitos*, it should prove to be that genus.

The species are very similar to one another and it is therefore difficult to distinguish them; the details of the striation of the elytra, as well as the general form of the body, the shape of the prothorax, and the structure of the antennæ, offer the chief means of separation; some are said to be extremely variable in size. Several of the species present a more or less distinct median channel on the head, extending from the depression at the vertex to the labrum; this is the case with the first three species in the following arrangement, while in the others the channel is either very obsolete or entirely absent.

1. **Catogenus integratus,** sp. n.

Angustus, piceo-brunneus, nitidus, elytris dilutioribus; prothorace suboblongo, posterius perparum angustato, parum punctato, margine laterali antrorsum subabbreviato.

Long. 15 millim.

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

This is closely allied to the following species, but the thorax is even less narrowed behind, and the oblong dorsal impressions on it are absent, as are also the punctate spaces, which in some other forms represent the depressions. The antennæ are thick, not elongate, the terminal two joints a little more slender than those preceding them. The median channel of the head is remarkably definite. The thorax is comparatively longer and narrower, less narrowed behind, and with the hind angles less marked and less plicate than usual. The elytra are very deeply striate, and the striæ at the extreme base are somewhat irregular, the first and second and the third and fourth being paired and connected, while the fifth and sixth do not quite reach the base, but are separated slightly from a vague depression which exists in front of them. The femora are broad.

Although we have received only one specimen of this insect, I feel no doubt as to its being distinct from *C. germanus*. It cannot be confounded with any other of our species of *Catogenus*.

2. **Catogenus germanus,** sp. n. (Tab. XVI. fig. 1.)

Angustus, brunneus, nitidus; prothorace posterius minus angustato, margine laterali antrorsum subabbreviato, parum punctato, dorso posterius in medio vage depresso, in depressione biplagiatim punctato, inter plagas lævigato.

Long. 9–12 millim.

Hab. Mexico, Cordova (*Sallé*), Jalapa, Tehuantepec, Bobo (*Höge*), Yucatan (*Sallé*); Guatemala, Mirandilla, El Reposo (*Champion*); Nicaragua, Chontales (*Belt*); Panama, Tolé (*Champion*).

This is narrower than our other large species and has short antennæ; the longitudinal channel on the middle of the head is distinct, though not deep. The narrow thorax is transversely convex, and exhibits the peculiarity that the lateral margin does not

extend as it were quite to the front; its sides are gently curved, and just before the base exhibit a more sudden though slight contraction, the hind angles being rectangular and scarcely at all plicate; the surface is polished and irregularly punctate, the punctuations being numerous and distinct along the sides, more scanty along the disc, except that there is on each side of the middle behind a slightly depressed longitudinal space, on which the punctures are somewhat larger and a little closer. The sixth stria at the base of the elytra curves inward so as to form a sort of transverse impression, and the fifth stria is continued so far forwards that it appears to join this impression, though really it is slightly separated; both these striæ are very short, though continued backwards as serial punctures. There is extremely little punctuation on the prosternum. The middle of the mesosternum is quite on a level with the metasternum, is polished, and has a well-marked oval fovea on the middle. The ventral segments are polished, with very little punctuation. The femora are unusually broad.

Specimens of *C. germanus* were named "*C. distinctus*, Guérin," in Sallé's collection; but on comparing them with Guérin's description, I think they are more probably an allied species. I have not, however, seen any example of *C. distinctus* from New Granada, the locality given by Guérin for his species.

3. **Catogenus collaris,** sp. n. (Tab. XVI. fig. 2.)

Elongatus, angustus, niger, elytris rufis; capite prothoraceque fortiter punctatis, hoc dorso vage impresso, medio lævigato; elytris striis quinto sextoque discretis, ad summum basin conjunctis.

Long. corp. 10, lat. $2\frac{5}{8}$ millim.; long. antennarum $4\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Head elongate and narrow, coarsely punctate, the median channel deep towards the vertex, obsolete in front. Thorax long and narrow at the base, with a well-marked, parallel-sided neck, the punctuation coarse. Elytra narrow, deeply striate, the fifth and sixth striæ distinct and neatly joined at the base. Prosternum coarsely punctate at the sides. Mesosternum deeply foveolate on the middle. Ventral segments polished, almost without punctuation. One specimen.

4. **Catogenus pusillus,** sp. n.

Angustus, parallelus, capite prothoraceque fuscescentibus, crebre punctatis, illo vertice canaliculato, hoc posterius in medio spatio angusto lævigato; elytris striis quinto et sexto discretis.

Long. corp. 6–7, antennarum $2\frac{5}{8}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Head closely punctate, the vertex impressed; along the middle there is a very faint indication of a channel. Thorax long and narrow, in front transversely convex, unusually coarsely punctate, with a narrow smooth space along the middle in front of the base; the lateral margin scarcely extends to the front; the sides are straight till

just behind the middle, when they converge a good deal, becoming straight again so as to form a neck at the base; the hind angles are carinate and almost acute. The elytra are very narrow, deeply striate, both the fifth and sixth striæ are quite distinct and are joined at the base. The prosternum is very sparsely punctate, the mesosternum deeply foveolate. The ventral segments are polished and impunctate. Three specimens.

5. **Catogenus temacensis,** sp. n.

Angustus, piceus, politus, pedibus elytrisque sanguineo-piceis; prothorace posterius bene angustato, plus minusve punctato, dorso in medio vix bi-impresso, sed ibidem fortius punctato, inter plagas punctorum latius lævigato.

Long. 8–12 millim.

Hab. Mexico, Temax in N. Yucatan (*Gaumer*).

Although at first sight extremely similar to the more darkly coloured individuals of *C. germanus*, this is no doubt a distinct species. In addition to the absence of the channel on the middle of the head, it differs as follows: it is rather less convex, and the thorax is more distinctly narrowed at the base, while the lateral margin extends very nearly as far forward as the front edge; the fifth and sixth striæ are perfectly and quite neatly conjoined at the base of the elytra.

In most of the other characters of the upper surface, the two species are more similar. The antennæ of *C. temacensis* are only moderately long; the punctuation of the thorax is much more variable than it is in most of the allied species, but the existence of an extremely slightly depressed area on each side of the middle towards the base, bearing coarser punctures, appears constant. The pencil of hairs on each side of the under surface of the head is placed very near to the mentum. There is some very coarse punctuation on each side of the prosternum. The under surface is very highly polished; there is a narrow fovea on the mesosternum. The femora are considerably less broad than they are in *C. germanus*. Ten specimens.

6. **Catogenus longicornis.**

Catogenus longicornis, Grouv. Bull. Soc. Ent. Fr. 1874, p. xxviii [1]; Ann. Soc. Ent. Fr. 1876, p. 489, t. 8. fig. 3 [2].

Hab. Mexico [1 2].

We have not received any example agreeing with these descriptions and figure. *C. longicornis* is perhaps nearest to *C. temacensis*, but has black elytra, marked with red behind.

7. **Catogenus planus.**

Catogenus planus, Reitter, Verh. zool.-bot. Ges. Wien, xxvii. p. 176 [1].

" Elongatulus, subparallelus, nitidus, obscure castaneus, planus; capite punctato, haud canaliculato, sulcis duobus brevibus antice insculptis; antennis valde elongatis, nigro-piceis, articulis oblongis, extus apice

subincrassatis; prothorace subquadrato, æqualiter punctato, lateribus subrectis, postice arcuatim subito angustatis, angulis posticis rectis, infra fortiter plicatis; elytris disco profunde 7-striatis.

"Long. 14 millim."

Hab. Mexico [1], Jalapa (*Höge*); Guatemala, Capetillo (*Champion*).

I have hesitated much as to whether this name should be applied to the species at present under consideration or to *C. puncticollis*. Reitter's description is applicable to both; but as he gives *C. planus* a length of 14 millim., and I have not seen an example of *C. puncticollis* longer than 12 millim., I have decided to apply the name to the species which meets the requirement in size as well as other particulars.

C. planus is remarkable for the length of the antennæ, which in the best developed example before me attain 11 millim. in length, though in another they are only about 8 millim. long. Independently of this character, *C. planus* is distinguished from all our other species by the less scanty punctuation of the ventral segments, and by the curious impressed line on the last ventral plate being situate farther from the hind margin, and by its not being angulate in the middle.

Of the four specimens before me, three are from Capetillo and one from Jalapa: two of those from the former locality have the antennæ about 11 millim. long, while in the example from Jalapa they are only about 8 millim.; the third specimen from Capetillo has the antennæ much mutilated, but from what remains I consider they would be, if perfect, of about the same length as the Jalapa example. Whether this difference in the length of the antennæ be sexual or not, I am quite unable to say.

8. **Catogenus puncticollis,** sp. n. (Tab. XVI. fig. 3.)

Depressus, nitidus, piceo-brunneus vel ferrugineus; capite prothoraceque evidenter punctatis, illo vertice canaliculato-foveolato, hoc deplanato, lateribus posterius rectis; elytris leviter striatis, striis quinto sextoque bene discretis, ad basin summum conjunctis; abdomine parce punctato.

Long. corp. 10–12, antennarum $4\frac{3}{4}$–6 millim.

Hab. Mexico, Jalapa, Huitzo (*Höge*); Guatemala, Capetillo, Panajachel (*Champion*).

Thorax with the anterior angles rectangular, the lateral margin extending to the front; the sides are scarcely curvate, but behind the middle are abruptly narrowed, and then before the base become quite straight, the hind angles being very conspicuous, plicate; the punctuation is very distinct, but becomes quite fine at the sides. The elytra are depressed, the striæ moderately deep, the interstices flat; the fifth stria is quite distinct throughout its length, and the sixth is but little less so. There is a short channel on the mesosternum, and the ventral segments are distinctly though sparingly punctate.

Mr. Champion met with a series of nine examples at Capetillo; the three Mexican exponents have the striæ on the elytra a little deeper.

The North-American *C. rufus* (Fabr.) is extremely similar to *C. puncticollis*, but has the head canaliculate.

Subfam. *CUCUJINÆ.*

This subfamily is usually defined by the characters "anterior coxal cavities open behind; tarsi of males heteromerous, of the females pentamerous." In the examination of our numerous species of *Læmophlœus* I have found that several insects placed in that genus have the front coxal cavities closed behind. Although I have given this character generic importance, I leave these forms in Cucujinæ, for the character is in the case of these insects one of transition, the cavities being in some cases scarcely closed, in others just perceptibly open, and in others broadly open.

The Læmophlœoid forms with closed coxal cavities never have the closure distinctly visible on superficial examination, and thus differ from the other forms of the family with the cavities closed; in nearly all of the latter the band closing the cavities is conspicuous on superficial examination.

PALÆSTES.

Palæstes, Perty, Del. Anim. Art. Bras. p. 83 (1830).

This genus has hitherto consisted of three South-American species, one of which has been known for many years, the other two—from Ecuador—having been recently added by Mr. Waterhouse. I now characterize five new forms from our region.

These insects have extremely slight external distinctive characters, colour being, in fact, almost the only one that is conspicuous; and it might therefore be well supposed that all are merely local races of one species, and possibly this may ultimately prove to be the case. I have, however, found on examination of the male organs of two of the most similar forms, viz. *P. bicolor* and *P. variipes*, that these structures present distinctions suggesting that the colour-differences may be indicative of genuine specific separation, and I have therefore treated all the forms for the present as species. Mr. Champion informs me that these insects are chiefly found between the thin crevices of freshly split sappy timber, and that they are often to be seen on the wing in forest clearings.

1. **Palæstes variipes,** sp. n.

Capite, prothorace, mesosterno, elytrorum quarta parte basali, femoribusque quatuor anterioribus rufo-testaceis; antennis, tibiis, tarsis, metasterno, abdomine, elytrorumque parte majore nigris; femoribus posterioribus nigricantibus, ante apicem plus minusve flavescentibus.

Long. 10–12½ millim.

Hab. GUATEMALA, Senahu, Sinanja and Sabo, all in Vera Paz (*Champion*).

This form greatly resembles the Brazilian *P. bicolor*, Perty. *P. variipes* has the black portion of the elytra more extensive, the metasternum black instead of fuscescent, and the posterior femora more infuscate, while the mandibles and the front of the

clypeus are less fuscescent. These colour-distinctions are so constant in the series of fifteen examples we have received that it is, I think, well to give the form a name, though ultimately it may possibly prove to be a localized variation.

2. **Palæstes nicaraguæ**, sp. n.

Capite, prothorace, mesosterno, metasterno ex parte majore, elytrorum tertia lata parte basali, femoribusque rufo-testaceis; antennis, tibiis, tarsis, abdomine, elytrorumque parte majore nigris; metasterno posterius utrinque fuscescente.
Long. 10–11 millim.

Hab. NICARAGUA (*Sallé*), Chontales (*Belt, Janson*).

Of this form I have seen four specimens. Although at first sight extremely similar to the Brazilian *P. bicolor*, yet the differences indicate a different distribution, not mere extension, of the colour. The extent of the black colour on the wing-cases is slightly less in *P. nicaraguæ*, the mandibles and clypeus are yellow, and even the terminal three joints of the antennæ are ferruginous; the dark colour on the metasternum is limited to a mark on each side of the posterior part, and the dark colour of the ventral segments does not amount to intense black, and here and there gives place to a more or less vague yellow tinge, especially along the mesial line. These colour-distinctions are constant in the four examples, but in two of them the metasternal patches of dark colour are connected by an intervening third mark.

3. **Palæstes abruptus**, sp. n. (Tab. XVI. fig. 9.)

Niger, pronoto, elytrorum parte lata basali, femoribusque (basalis exceptis) testaceis.
Long. 10–12 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 3000 to 6000 feet (*Champion*).

We have received a fine series of this species, exhibiting very little variation except in size, and the fact that the terminal three joints of the antennæ are obscurely rufescent to a variable extent. The black colour on the wing-cases covers about one-half of their area. *P. nigriceps*, Waterh., from Ecuador, is extremely similar to this form, but has the prosternum yellow.

4. **Palæstes nigridens**, sp. n.

Capite cum mandibulis, clypeo late anterius, antennis, tibiis, tarsis, femorum basibus, elytrorum dimidia parte apicali, metasterno, abdomineque nigris; capite, prothorace, elytrorum parte basali, femoribusque rufo-testaceis.
Long. 10–11 millim.

Hab. PANAMA, Bugaba, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

This is the nearest of the forms discovered in our region to *P. bicolor*; but it has the mandibles almost entirely black (with the exception of the somewhat rufescent basal lobe), the front of the clypeus broadly blackish, and the tips of the femora black.

These are smaller differences than those separating the other forms, yet I think it will prove advantageous to give this form a distinct name; as an additional justification for so doing, I may mention that when the mandibles are opened their basal lobe is seen to be differently shaped in the two insects, and that the ædeagus and parts connected with it also exhibit distinctive characters. Six specimens.

5. **Palæstes scutellaris,** sp. n.

Mandibulis, clypeo late anterius, antennis, tibiis, tarsis, pedibus posterioribus, mesosterno, abdomine, elytrisque (fere totaliter) nigris; capite, prothorace, mesosterno, elytris plaga scutellari, femoribusque ex parte majore rufo-testaceis.

Long. 9–11 millim.

Hab. GUATEMALA, Zapote, Capetillo, Cerro Zunil (*Champion*).

This form is readily distinguished from the others by the elytra being totally black, with the exception of a triangular patch about the scutellum. Only three examples have been obtained: one of them is in a somewhat deteriorated condition, and has the elytra almost entirely black.

PEDIACUS.

Pediacus, Shuckard, Elem. Brit. Ent. i. p. 185 (1839); Erichson, Naturg. Ins. Deutschl. iii. p. 311.

This is a small genus of subcortical insects, widely distributed in the Holarctic region, but not previously recorded from the tropics.

1. **Pediacus major,** sp. n. (Tab. XVI. fig. 10.)

Depressus, niger, pedibus piceis; prothorace dense punctato, anterius transversim impresso, lateribus denticulatis.

Long. 7–7½ millim.

Hab. GUATEMALA, Totonicapam and Quiché Mountains 7000 to 10,500 feet (*Champion*).

Thorax densely and coarsely, but irregularly punctate, the punctuation at the sides confluent and rugose, on the middle a narrow longitudinal smooth space; near the front a very distinct transverse depression; the length is rather greater in the male than in the female, and in this latter sex the undulations are more distinct; the posterior denticle is very distinct, and is placed only very slightly in front of the basal line. The elytra are very dull, and have a very coriaceous, or leathery, surface, and bear an excessively fine and scanty pubescence. The male has the front feet very slightly dilated, the submentum very densely finely punctate in front, and a large impression on the last ventral segment, the female having two, widely-separated, vague, large depressions. The antennæ, too, are a little longer in the male than they are in the female.

We have received six examples of this species: they were found under bark of coniferous trees.

2. **Pediacus similis,** sp. n.

Depressus, fusco-niger, pedibus piceis; prothorace dense fortiterque punctato, anterius transversim impresso, lateribus denticulatis; elytris opacis, dense minus subtiliter coriaceis.
Long. 6 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

We have received only two examples of this species; it appears to be excessively similar to *P. major*, but the densely, and comparatively coarsely, coriaceous sculpture of the elytra forms so marked a distinction that I think it better to separate the two forms.

3. **Pediacus confertus,** sp. n.

Depressus, fusco-niger, opacus, pube subtili depressa sparsim vestitus; prothorace densissime punctato, lateribus denticulatis; pedibus rufo-obscuris.
Long. 4–5 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet, Quiché Mountains 7000 to 9000 feet, Capetillo (*Champion*).

Head densely punctured, slightly shining. Thorax strongly transverse, extremely densely punctured, and with a distinct depressed flavescent pubescence, the sculpture towards the sides assuming the form of fine granules; there is scarcely any trace of a smooth line down the middle, and the surface is almost unimpressed; the lateral denticulation is distinct, there being three acute denticles on each side, and between the anterior one and the second an obtuse angulation of the margin; the third, or posterior, denticle is placed scarcely at all in front of the basal line. The elytra are remarkably dull, owing to a very dense coriaceous sculpture, and they have a very scanty, extremely depressed setosity of a yellowish, almost golden, colour. Under surface closely and finely punctate.

Twelve specimens were met with at Totonicapam and Quiché under the bark of fir-trees. The single specimen from Capetillo belongs, I think, to the same species, though the setosity of the surface is rather more conspicuous.

4. **Pediacus mexicanus,** sp. n.

Depressus, fusco-ferrugineus, antennis pedibusque rufis; subnitidus, tenuissime pubescens; prothorace dense punctato, lateribus denticulatis.
Long. 4–4½ millim.

Hab. MEXICO, Jacale (*Sallé*).

Head finely punctate, with a distinct minute angle behind the eyes. Thorax with the disc fuscous, the margins more or less broadly ferruginous, densely and finely punctate, the lateral denticles distinct, the posterior one placed at the base. Elytra somewhat shining, minutely pubescent, the coriaceous sculpture very fine.

We have received only two examples of this insect, and one of them has lost its leg

and antennæ. It can be readily distinguished from our other species by the less dull upper surface, and by the smaller eyes; the minute angle behind these organs is consequently less concealed.

PARAPHLŒUS, gen. nov.

Mandibulæ subtus processu brevi laminiformi armatæ. Genæ anterius processu brevi, introrsum vix curvatæ. Acetabula antica haud occlusa. Tarsi tenues, quadriarticulati.

The above characters, brief as they are, separate two species of small Coleoptera from other Cucujidæ, and I do not think their location in any other family would be at all satisfactory. I regret that the material at my disposal does not enable me to state the structural characters with the fulness and precision necessary for deciding on their affinities; but the points I am able to state will, I think, lead to their identification.

The general appearance is that of the elongate *Læmophlœi*, such as *L. clematidis*, but the tarsi are very slender, and I am not able to detect more than four joints on any of the feet; in addition to this, the curious descending process at the base of the mandible is very unusual, but is found in certain *Læmophlœi*. The two species will perhaps prove to belong to different genera. The characters will be taken, however, from *Paraphlœus crassiceps*.

The antennæ are rather short, eleven-jointed, the terminal three joints perceptibly wider than the others. The mandibles are rather long, and are so much curved and arched that they greatly conceal the other parts of the mouth, but they are not co-adapted, meeting only at the tips, where they cross a little and are apparently bidentate. The labrum is not visible, but the epistome is produced in a subtriangular process directed downwards; the mentum is directed inwards and, I think, is surmounted by a large ligula (somewhat of the nature of that of *Prostomis*), the front margin of which is in apposition with that of the epistome (or more probably of the labrum concealed under this). The labial palpi appear to be two-jointed, the terminal joint acuminate. The maxillæ cannot be seen, but the palpi apparently have a terminal joint shaped like that of the labial pair. The genæ are in front thick and slightly prominent, and just in front of them is a process descending from the base of the mandible. The eyes are distant from the front of the thorax and placed quite near the base of the antenna. The front coxæ are small and globose, moderately separated by the prosternal process, which is bent upwards behind them; their acetabula are scarcely at all prolonged externally, and not closed behind, though the form of the parts would lead one to suppose they might be closed. The prosternal sutures can scarcely be detected, and the lateral margin of the thorax also is obsolete. The middle coxæ are moderately separated. The metasternum is elongate. The hind coxæ are slightly separated by a very short obtuse abdominal process. There are five subequal ventral segments, not connate. The legs are slender; the four posterior tarsi slender, with the basal three joints short, subequal, the terminal joint elongate. On the front feet I am not able to see more than three joints.

The North-American genus *Narthecius* has lately been the object of a renewed study by Capt. Casey (Ann. N. York Acad. v. p. 321, 1890), and, judging from the information he gives, there is little doubt that it is allied to *Paraphlœus*. He assigns a place in the Passandrinæ to *Narthecius*, though the characters he mentions scarcely justify the selection of this position. But whatever may prove to be the case with *Narthecius*, I think it impossible to place *Paraphlœus* in Passandrinæ, the essential character of that

subfamily being the folding inwards of the genal processes and their close adpression so as to cover the maxillæ. The only character that *Paraphlœus* possesses to distinguish it from the *Lœmophlœi* is the four-jointed feet. I do not attach great importance to this peculiarity, because it is evident that the number of tarsal joints is in this family much less important than it usually is in Coleoptera. When the basal joint of the tarsus is so extremely short as to leave it doubtful whether it exists or not, it is evidently a bad character to rely on. This is well shown by the difference of opinion that has existed for many years as to whether *Prostomis* has four- or five-jointed tarsi. Hence I entertain but little doubt that *Paraphlœus* is really closely allied to *Lœmophlœus*, although I believe the tarsal formula to be different in the two genera.

1. **Paraphlœus crassiceps,** sp. n. (Tab. XVI. fig. 7.)

Angustus, sublinearis, capite majore; nigricans, elytris pedibusque testaceis, antennis mandibulisque sordide testaceis; prothorace utrinque carinula subtili ornato; elytris subtilissime costato-striatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ rather short, stout, first joint somewhat elongate, second inserted on one of the angles of the first, terminal three joints slightly thickened. Head large, mandibles elongate; epistome prolonged, narrowed towards the front, rounded at the apex; extending from the base of the antenna to near the back of the head there is on each side a fine straight carina; the surface is finely and not closely punctate. Thorax elongate, distinctly narrowed behind, finely punctate; the lateral margin can be distinguished near the base, though very fine; an extremely fine, quite straight line runs from the front margin to the hind angle; there is a very minute fovea on the middle near the front. The elytra are elongate and narrow, and are traversed by three very fine costæ. The legs are slender, the tarsi very slender. Three specimens.

2. **Paraphlœus longicollis,** sp. n. (Tab. XVI. fig. 8.)

Angustus, linearis, subdepressus, ferrugineus; prothorace perelongato, tenuissime costato, nitido, parcissime punctato; elytris sublævigatis, obsolete costatis.

Long. vix 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Epistome prolonged, truncate in front. Antennæ rather short and feeble, first joint globular, terminal three joints a little incrassate. From the base of the antenna there extends backwards a very delicate carina; the surface of the head is shining, very sparingly punctate. Thorax very long, nearly parallel, but perceptibly narrowed behind, the lateral margin very fine, and parallel with it an extremely fine costa extending from apex to base, punctuation fine and scanty. Elytra very narrow, very obsoletely costate, so that they appear almost smooth. One specimen.

This little insect is not likely to be considered congeneric with *P. crassiceps*,

the mandibles being comparatively short; they possess, however, a distinct basal protuberance beneath, and the feet appear to be formed as in the typical species of the genus.

INOPEPLUS.

Inopeplus, Smith, Cat. Col. Brit. Mus., Cucujidæ, i. p. 4 (1851).
Ino, Laporte (nec Oken) et auct.

This very peculiar genus has a few representatives in most of the tropical regions of the world. Our five species fall into three sections, distinguished by characters that leave little doubt they will ultimately form distinct genera. *I. bifossulatus* differs by the broad distinct gula and the form of the submentum. In *I. jugularis* and *I. concolor* the genæ are prolonged to form a floor to the point of insertion of the antennæ; in *I. centralis* and *I. insularis* they are simple.

"*Ino*" was used two or three times in zoology before Laporte applied it in 1835 to the insects of this genus.

1. **Inopeplus bifossulatus.** (Tab. XVI. fig. 11.)

Ino bifossulata, Reitter, Col. Hefte, xv. p. 40 (1876) [1].

Hab. Mexico, Cordova (*Sallé*), Jalapa (*Höge*); Guatemala, near the city, Capetillo, Zapote, Cerro Zunil, Purula (*Champion*).—Colombia, Medellin [1].

A figure of this very peculiar insect has not hitherto been published.

2. **Inopeplus insularis.**

Inopeplus insularis, Grouv. Notes Leyd. Mus. xx. p. 41 [1].

Hab. Guatemala, El Reposo 800 feet (*Champion*).—Antilles, St. Vincent and Grenada [1].

I am unable to distinguish the two specimens received from Guatemala from a series from the West Indies (St. Vincent and Grenada), except by their brighter colour. As the West-Indian insect is variable in this respect, I think it highly probable that examples will be found to bridge over this slight distinction.

3. **Inopeplus centralis,** sp. n.

Sat angustus, depressus, nitidus; capite prothoraceque fortiter punctatis; piceus, elytris testaceis vage fusco pictis.
Long. $3\frac{1}{2}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ rather long. Head narrow, densely and coarsely punctate, with a deep longitudinal fovea on the middle; epistomal impression extending all across the front, not quite straight behind. Thorax very shining, coarsely but sparingly punctured.

Elytra testaceous at the base, infuscate before the tip, which is quite pallid. One specimen.

Closely allied to *I. insularis*; distinguished by the coarser punctuation of the head and thorax, and the deep fovea on the former.

4. **Inopeplus jugularis,** sp. n. (Tab. XVI. fig. 12.)

Brevis, latus, depressus, nitidus, parce punctatus, niger; pedibus piceis, tarsis testaceis.
Long. $2\frac{1}{2}$–$3\frac{1}{4}$ millim.

Hab. GUATEMALA, Zapote, Cerro Zunil (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This species is highly remarkable on account of possessing broad jugular pieces that are considerably produced and turned upwards so as to be visible from the upperside, giving an appearance of the antenna being inserted in a large cavity. The antennæ are short, the terminal joint pale at the tip. The head is very short and broad, only finely and distinctly punctured, the elongate transverse epistomal depression remarkably deep and definite. Thorax very short and broad, punctured like the head. Elytra impunctate. Four specimens.

5. **Inopeplus concolor,** sp. n.

Fulvo-testaceus, haud latus, depressus, nitidus; capite prothoraceque sat parce et fortiter punctatis; elytris parcissime punctatis.
Long. $4\frac{1}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ rather short. Head very short, not broad; epistomal depression elongate. Thorax narrower than the head, very narrow at the base. Elytra sparingly but distinctly punctured, about as long as the part of the abdomen they leave uncovered.

We have received only one specimen of this species; it is remarkable on account of its uniform bright colour. The jugular pieces are not so large as they are in *I. jugularis*. The species bears a superficial resemblance to *I. præustus*, Chevr., but that insect does not belong to this section.

HEMIPEPLUS.

Hemipeplus, Latreille, Fam. Nat. Règne Anim. p. 398 (1825).

The position of the very rare insects composing this genus has never received adequate consideration. They are not structurally allied to any Cucujidæ, and, as the tarsi are heteromerous in both sexes, there can be little doubt that they should find a place among the Heteromera, not here. The genus has no structural relationship of any kind with *Læmophlœus*, indeed the heteromerous tarsi of the males of that genus appears to be the only reason for placing *Hemipeplus* in Cucujidæ. Its similarity with

Inopeplus is about as little as can be. It should be added that *Hemipeplus* was originally assigned to Cucujidæ because it was supposed that the female, when discovered, would prove to have five joints on the hind feet. The contrary has, however, proved to be the case.

The genus is distributed from the Southern States of North America to Brazil.

1. **Hemipeplus mexicanus.**

Hemipeplus mexicanus, Grouv. Ann. Soc. Ent. Fr. 1896, p. 196, fig.[1]

Hab. MEXICO[1]; GUATEMALA, Chiacam in Vera Paz (*Champion*).

Only one specimen was procured by Mr. Champion.

LÆMOPHLŒUS.

Læmophlœus, Castelnau, Hist. Nat. Ins. Col. ii. p. 385 (1840).

This genus was established by Castelnau for a single European species, *Cucujus monilis*, Fabr.; the characters he assigned to it have no distinctive importance, but the species in question must remain the type of the genus. Our *L. suturalis* and *L. distinguendus* are strictly congeneric with *L. monilis* (now called *L. denticulatus*, Preyssl.).

The difficulties connected with the study of *Læmophlœus* are well known, and are increased by the fact that many of the species are extremely rare. At present upwards of 100 species are assigned to it. I have, however, here removed from *Læmophlœus* all those forms that have the anterior acetabula closed, and have established various genera for them. This still leaves the genus a composite one, and I have endeavoured to make it somewhat more natural by proposing *Rhabdophlœus* for a few forms with the hind coxæ unusually approximated, and *Rhinophlœus* for a few other species in which the front of the head is slightly prolonged anterior to the antennal insertion. After doing this, I find that there are forty species of our fauna still left in *Læmophlœus*, and I regret that I am not able to arrange them in groups to facilitate their determination.

I am much indebted to M. A. Grouvelle for examining a series of our *Læmophlœi*, and favouring me with the names of those known to him. Hitherto only about nine species of *Læmophlœus* have been recorded from our region. Of these *L. teapensis*, *L. pallentipennis*, and *L. minusculus* were not recognized by M. Grouvelle amongst our series, and I have removed *L. capito*, *L. gundlachi*, and *L. costatus* to other genera. I now add thirty-one new species, as well as three or four South-American forms, to the Central-American fauna.

1. **Læmophlœus distinguendus,** sp. n. (Tab. XVII. fig. 1.)

Deplanatus, lævigatus, nitidus, rufo-testaceus, sæpe circa scutellum et ad suturam nigricans; antennis minus

gracilibus, articulis tribus ultimis evidenter paullo latioribus; prothorace valde transverso, utrinque profunde unistriato; elytro singulo evidenter tristriato, exteriusque costato-marginato.

Long. $2\frac{1}{2}$–$3\frac{1}{2}$ millim.

Mas, major, capite latiore, linea epistomatica utrinque curvata; antennis articulo basali superne leviter deplanato, ante apicem setis erectis ornato.

Hab. GUATEMALA, Zapote, Pantaleon, Capetillo (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This species and *L. suturalis*, though of broad form, are distinguished from their allies by the narrower and more pointed process separating the hind coxæ; this character, combined with the deep coarse thoracic stria, should enable them to be easily recognized. The thorax is a little undulating at the sides, and there is a distinct denticle behind the middle. The three elytral striæ are widely separated, and the intra-marginal costa is quite distinct; the sides external to this costa are perpendicular; the epipleuræ are broad and horizontal. The under surface is polished and shining, only sparingly and obsoletely punctate. The punctuation both of the upper and under surfaces is variable, and is sometimes almost entirely obsolete. Thirty-two specimens.

L. distinguendus is no doubt allied to the Texan *L. terminalis*, Casey, as well as to the European *L. denticulatus*, Preyssl.

2. **Læmophlœus suturalis.** (Tab. XVII. figg. 2, head of large male; 2 *a*, head of small male; 2 *b*, head of female.)

Læmophlœus suturalis, Reitter, Col. Hefte, xv. p. 50 (1876) [1].

Deplanatus, lævigatus, capite prothoraceque parce punctatis; rufo-testaceus, circa scutellum nigricans; antennis minus gracilibus, articulis tribus ultimis evidenter paullo latioribus; prothorace valde transverso, utrinque profunde unistriato; elytro singulo evidenter tristriato, exterius costato-marginato.

Long. 3–$3\frac{1}{2}$ millim.

Mas, major, capite majore, linea epistomatica recta utrinque abbreviata; antennis articulo ultimo elongato, anterius leviter emarginato.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA [1], Zapote, Yzabal (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).—COLOMBIA [1].

Var. *circumdatus*, n.

Elytris margine exteriore nigricante. Maris linea epistomatica obsoleta, a labro latius separata.

Hab. MEXICO, Jalapa (*Höge*).

This species is very closely allied to *L. distinguendus*: though the males of the two are readily distinguished, I am unable to point out any characters that will distinguish the females without actual comparison. *L. suturalis*, ♀, has a longer after-body, a more distinctly punctured head and thorax, and the thorax is a little less rounded at the sides.

The difficulty of determining this species is increased by the fact that the male characters become so much diminished that in some specimens scarcely any external distinction remains as regards the head and antennæ; the sexes are, however, readily distinguished by the number of joints in the hind feet.

M. Grouvelle, who examined males of these two species, thought them distinct and suggested that *L. distinguendus* might perhaps be referable to *L. terminalis*, Casey. *L. terminalis* is, however, described and figured as possessing an emarginate labrum; this is not the case with *L. distinguendus* and *L. suturalis*, in which the labrum is truncate in front and very slightly asymmetrical. The colour of *L. terminalis*, moreover, is apparently different from that of our species. Twenty-four specimens, most of them from Zapote. The unique individual from the Volcan de Chiriqui is a well-developed male. The variety is represented by a single example.

Reitter's description of *L. suturalis* was made from a male from Colombia, in the von Bruck collection, and a female from Guatemala. This female has now passed into the possession of M. René Oberthür, who has been so kind as to send it for my inspection. Although a poorly developed example, I think it pertains to the species now described. Reitter's description applies, however, only in a very dubious manner to our insect, so that it is quite probable that the male he had before him was that of some other allied species.

3. **Læmophlœus germaini.** (Tab. XVI. fig. 13, ♂.)

Læmophlœus germaini, Grouv. Ann. Soc. Ent. Fr. 1896, p. 200[1].

Latus, depressus, politus, nigricans, antennis articulo ultimo, tibiis tarsisque rufis; elytro singulo medio plaga magna testacea; fronte profunde triangulariter foveolata.

Long. $2\frac{1}{4}$–3 millim.

Hab. Guatemala, Las Mercedes (*Champion*).—Colombia[1]; Bolivia[1].

Var. Paullo minus brevis, elytrorum plagis testaceis majoribus.

Hab. Panama, Bugaba (*Champion*).

Antennæ thick, not at all clavate, distinctly pubescent; the terminal joint paler than the others. Head very broad and short. Epistomal line absent in the large males, in the smaller examples present and connected with the deep triangular fovea on the middle of the front; the lateral striæ very distinct, as well as the posterior line; the surface very flat and polished. Thorax short and broad, greatly narrowed behind; the lateral striæ very deep, the sides with an obscure denticle in front of the hind angle, this latter minutely prominent; the disc very polished and flat. Scutellum large, triangular. Elytra short and broad, very highly polished, with a large pale mark about the middle of each; with a distinct sutural stria and a fine intra-lateral carina, and between the two a broad but abbreviated stria. Five specimens from Guatemala; six from Bugaba.

I cannot distinguish between small males and females, except by the number of joints in the hind feet.

I am indebted to M. Grouvelle for communicating to me a pair of *L germaini* from Colombia. They are of paler colour than any of our specimens, the yellow mark on

the elytra is smaller, and the thorax is a little less narrowed behind, but I do not consider them sufficiently different to require a name. The species is an extremely peculiar one; all the coxæ are very widely separated; the epipleuræ appear at first sight to be small, but they are really broad, though much less inflexed than usual.

4. **Læmophlœus curtus.**

Læmophlœus curtus, Grouv. Bull. Soc. Ent. Fr. 1876, p. xxxiii [1].

Hab. PANAMA, Bugaba (*Champion*).—BRAZIL [1].

Mr. Champion procured a good series of this very distinct *Læmophlœus*. I have seen no other examples. M. Grouvelle expresses no hesitation as to considering it the same species as his Brazilian type, which he informs me is from Rio Janeiro.

5. **Læmophlœus breviceps,** sp. n. (Tab. XVI. fig. 14.)

Deplanatus, rufus, nitidus, elytris stramineis, leviter striatis; capite prothoraceque brevibus, lævigatis; antennis haud crassiusculis, leviter clavatis.
Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ yellow, not stout, the apical three joints distinctly a little broader, but scarcely longer than those preceding them. Head broad and short, the eyes placed but a little distance in front of the thorax. Thorax very short and broad, only slightly narrowed behind. Striæ of the elytra feeble, the intra-lateral carina very fine but distinct. Four specimens, three males and one female.

Distinct from most of the allied forms by the very short head: in this it almost agrees with *L. championi*, but the eyes are much smaller and placed nearer to the thorax, and there is no trace of any peculiar mandibular structure, the mandibles being nearly entirely covered by the labrum. This species and *L. championi* differ from *L. castaneipennis*, Grouv., by their broader, flatter form, and the clear red colour, which extends to the antennæ. I cannot ascertain the structure of the feet in *L. breviceps*, but I am pretty sure that both sexes are before me.

6. **Læmophlœus championi,** sp. n.

Deplanatus, rufus, nitidus, elytris stramineis, leviter striatis; antennis haud crassiusculis, leviter clavatis.
Long. $2\frac{1}{4}$ millim.
Mas, mandibulis subtus ad basin processu descendente armatis.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Although we have only one specimen of this species, and it is very closely allied to *L. hoplites*, I have no doubt it is distinct. The difference in colour is perhaps not of much importance, but there is a definite distinction in the antennæ, which are altogether smaller in *L. championi*; the eighth joint is a good deal smaller than the sixth, and is also much shorter and slightly narrower than the tenth. The head and

thorax are highly polished and only very obsoletely punctate. The intra-lateral carina of the elytra is quite distinct.

7. **Læmophlœus hoplites,** sp. n.

Deplanatus, niger vel piceus, nitidus; elytris stramineis, leviter striatis; antennis haud clavatis, sed apicem versus leviter incrassatis.

Long. $2\frac{1}{2}$–3 millim.

Mas, mandibulis subtus ad basin processu descendente armatis.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Cerro Zunil, Zapote, San Gerónimo (*Champion*).

Antennæ rather long, from the fifth to the eleventh joints slightly thicker, but the three terminal joints not forming a club, and scarcely at all longer than those preceding. Head and thorax flat, extremely shining, sparingly but distinctly punctate. Labrum large, rounded in front. Thorax strongly transverse, a good deal narrowed behind, intra-lateral stria very distinct. Elytra pale straw-colour, the shoulders forming a minute denticle, intra-lateral carina very fine and visible only at the base. Striæ very fine, without any trace of punctuation. Fifteen specimens.

The peculiar process on the male mandibles exists in two forms—the one we have figured, where it is large and conspicuous, and another in which it is quite small and would escape observation if not looked for. The black colour of the anterior parts and the thicker antennæ readily distinguish *L. hoplites* from *L. castaneipennis*, Grouv. A specimen in Sallé's collection was, I believe, formerly considered by M. Grouvelle to be the female of *Parandrita capito*; but he informs me that he is convinced this determination was erroneous.

8. **Læmophlœus boops,** sp. n. (Tab. XVI. figg. 15, 15 *a*.)

Castaneus, thorace piceo, elytris testaceis, antennis pedibusque rufis, illis leviter clavatis; minus depressus, capite brevi, lato, oculis prominulis; prothorace fortiter transverso, basin versus angustato, linea intra-laterali subtiliter elevata; elytris stria suturali carinaque intra-laterali subtilibus.

Long. 2 millim.

Hab. GUATEMALA, Senahu (*Champion*).

Head strongly narrowed in front, so as to be almost triangular; epistome deeply excised over the labrum, which is large and nearly covers the mandibles. Antennæ moderately long; third joint distinctly longer than the second, the three joints of the club a little longer and broader than those preceding. Thorax rather convex transversely. The striæ of the elytra, other than the sutural, and the external carina are very indistinct. The tibiæ are extremely slender. The under surface is highly polished. Two specimens, probably males.

This species is very similar to *L. anticus*, but the form is more convex, and the eyes are not free behind, but supported by a very distinct lobe of the head.

9. **Læmophlœus anticus,** sp. n.

Angustus, perpolitus, rufo-testaceus; elytris obsolete striatis; antennis gracilibus, apice clavato.
Long. $1\frac{3}{4}$ millim.
Mas, mandibulis basi externe processu descendente parvo armatis.

Hab. Panama, Tolé (*Champion*)

This is another species of which we have received only a single example, but which is, I am sure, a distinct one. The head is broad and short, the epistome is deeply excised at the junction with the labrum, which is vrey large and extends as far as the tips of the mandibles. The eyes are rather large, and are separated from the thorax by a space rather less than their own length. The antennæ are slender, rather long. There are no punctures on the head and thorax. The elytra have a distinct sutural stria and a fine intra-lateral carina; the other striæ are very indistinct.

10. **Læmophlœus minutus,** sp. n. (Tab. XVI. figg. 16, 16 *a*.)

Parvus, rufo-testaceus, nitidus, perpolitus, fere lævigatus; elytris leviter striatis; prothorace valde transverso; antennis tenuibus, apice clavato.
Long. $1\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ moderately long, slender, the three terminal joints distinctly broader than those preceding. Head very broad and short; epistome scarcely at all excised behind the large labrum, the latter covering the mandibles. Thorax quite twice as broad as long, narrowed behind, impunctate, and highly polished. Elytra very indistinctly striate, but with the fine intra-lateral carina distinct. One specimen, probable a male.

This little insect appears to belong to a distinct species. Notwithstanding the very short head, the eyes are separated from the thorax by a length equal to their own. Although very similar to *L. boops* and allies, it is very easily distinguished by the form of the front of the head, the middle being less advanced in comparison than it is in the preceding species (*L. curtus* to *L. anticus*).

11. **Læmophlœus teapensis.**

Læmophlœus teapensis, Grouv. Ann. Soc. Ent. Fr. 1876, p. 494, t. 8. fig. 11 [1].

Hab. Mexico, Teapa [1].

A small insect, $1\frac{1}{2}$ millim. long, perhaps allied to *L. ignobilis*.

12. **Læmophlœus ignobilis,** sp. n.

Subdeplanatus, castaneus, pedibus dilutioribus; politus, capite prothoracisque disco parce, subtiliter punctatis; antennis leviter clavatis; elytris fere estriatis, stria intra-humerali subtili, posterius subtilissima.
Long. $1\frac{1}{2}$ millim.

Hab. Mexico, Motzorongo in Vera Cruz (*Flohr*); Guatemala, Chiacam, San Juan, and Senahu in Vera Paz (*Champion*); Nicaragua, Chontales (*Janson*).

Notwithstanding the great general resemblance of this species to *L. boops* and *L. anticus*, it is readily distinguished by the absence of a flattened disc to the elytra. There is no trace whatever of a carina limiting the outside of a flat area, as there is in the species mentioned; but, instead, there is in *L. ignobilis* a very fine intra-humeral stria or carina. The head is very broad and short; the prominent eyes are placed very near the thorax; the epistome is advanced in the middle, deeply excised at the attachment with the labrum; the latter is rounded in front and covers the mandibles. The antennæ are distinctly clavate in the female, but in the male the terminal three joints are longer, and the club is therefore more indistinct. The thorax is strongly transverse, a little broader and more narrowed behind in the male than in the female. The elytra are highly polished, and this renders it very difficult to distinguish the extremely fine striæ.

The four specimens from Mexico agree fairly well, except as to the characters I have treated as sexual. There are only one or two examples from each of the other localities, and they all differ slightly from the type and from one another, but the differences are too small to be considered specific on such slight evidence. One of the specimens from San Juan has the eyes placed markedly in advance of the front of the thorax.

13. **Læmophlœus puncticollis,** sp. n.

Testaceo-castaneus, nitidus, haud depressus; capite prothoraceque parce, minus subtiliter punctatis, hoc lateribus subrotundatis; antennis clavatis; elytris striis suturali intra-humeralique discretis.

Long. $1\frac{1}{3}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

We have received only two specimens of this obscure insect, but I think the sexes are represented, the head being a little broader and the antennæ a little longer in one example. It is distinguished from the preceding species, *L. ignobilis*, by the very distinct punctures on the middle of the thorax, by the less depressed form, and by the more rounded sides of the thorax. Thorax rounded at the sides and much narrowed behind, the intra-lateral stria very distinct. The sutural and intra-humeral striæ are very distinct on the elytra, but there is no trace of an intra-lateral ridge.

14. **Læmophlœus endomychus,** sp. n.

Castaneus, antennis pedibusque dilutioribus, politus, capite thoraceque parce punctatis; antennis clavatis; prothorace minus fortiter transverso, basin versus angustato; elytris subtiliter striatis.

Long. $1\frac{2}{3}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Head small; epistome margined in front, not angularly produced on each side of the labrum; this is small, and does not cover the rather small mandibles. The antennæ are rather short, the terminal three joints distinctly thicker than the others. Thorax a good deal narrowed behind, the side margin almost straight, scarcely visibly crenulate,

distinctly more raised near the hind angles; the intra-lateral carina well-marked, and between it and the side margin a more than usually distinct fovea. Elytra not flattened, with a well-marked sutural stria, an intra-humeral stria, and one or two more indistinct striæ between them. One specimen.

Distinguished from *L. puncticollis* by the indistinct punctuation of the thorax, and the very evident fovea on each side. On comparison numerous slighter differences in form are seen.

15. **Læmophlœus clavicornis,** sp. n. (Tab. XVI. fig. 17, ♀.)

Subconvexus, castaneo-testaceus, nitidus, fere impunctatus; antennis clavatis, brevibus; prothorace brevissimo, lateribus fortiter rotundatis; elytris striis tribus subtilibus ornatis; pedibus anterioribus et intermediis minus late distantibus.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

This little beetle is unlike a *Læmophlœus* in consequence of the less depressed form, and the short thorax with rounded sides. It is most like *L. ignobilis*, from which it differs by the distinct epistomal line, and the less widely separated front and hind legs. The antennæ are short, with the terminal three joints much broader than those preceding. The head is small, the epistome separated by a very distinct suture. The very short thorax is much rounded at the front angles; the hind angles are minutely prominent; the surface is sparingly, very finely punctate. The elytra have three or four very fine striæ, the sutural one being very indistinct.

16. **Læmophlœus immersus,** sp. n. (Tab. XVI. fig. 18.)

Angustus, haud depressus, piceo-niger, elytris stramineis; antennarum basi pedibusque sordide rufis; prothorace haud transverso, basin versus angustato; elytris obsolete striatis.

Long. fere 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Of this very distinct species we have but one specimen. I presume it to be a female, the mandibles being unusually small, and the labrum also quite small. The head is immersed in the thorax quite to the eyes; the epistome is emarginate in front and denticulate on each side of the labrum. The antennæ are rather long, moderately stout, thicker towards the tip, not distinctly clavate. Thorax elongate, narrowed behind, transversely convex, near the sides with a fine carina, on the middle with distinct but distant punctures. Elytra pallid, very finely striate, without intra-lateral carina.

I am unable to distinguish more than four joints on either of the feet of this peculiar species; so that it seems probable that the basal joint may have in this case entirely disappeared; this is the more remarkable as the following joint (*i. e.* the basal one as shown in fig. 18) is unusually elongate.

17. **Læmophlœus convexus.**

Læmophlœus convexus, Grouv. Ann. Soc. Ent. Fr. 1876, p. 493, t. 8. fig. 10[1].

Hab. GUATEMALA, Torola, Zapote (*Champion*); CENTRAL AMERICA[1].

Six examples. Mr. Grouvelle's figure appears to have been made from a female. The male has the mandibles elongate, projecting much beyond the labrum.

18. **Læmophlœus incisus,** sp. n.

Testaceus, nitidus, parce subtiliter punctatus, deplanatus; antennis clavatis, articulo ultimo elongato; capite linea epistomatica obsoleta; elytris costa intra-laterali striisque tribus subtilibus, interstitiis latis, minus discrete seriatim punctatis.

Long. $2\frac{3}{4}$–3 millim.

Mas, capite majore, fronte utrinque supra antennis incisura angusta, profunda instructo.

Hab. GUATEMALA, Zapote, Las Mercedes (*Champion*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Antennæ rather long and stout, the terminal three joints distinctly thicker, the end one elongate, nearly as long as the two preceding together; third joint longer than the second. Head with an obsolete but distinct epistomal line; excised over the labrum, which is moderately large, but does not extend to the tips of the mandibles; eyes large and convex; surface finely rather sparingly punctate. Thorax transverse, rather strongly narrowed behind; the intra-lateral striæ very distinct, the surface finely and not closely punctate. Elytra with the disc flattened and defined by a distinct costa.

19. **Læmophlœus amulæ,** sp. n. (Tab. XVI. fig. 19, ♂.)

Haud depressus, fuscus; capite prothoraceque dense punctatis; elytris striato-punctatis, interstitiis æqualibus; antennis elongatis, haud clavatis.

Long. 2 millim.

Hab. MEXICO, Amula in Guerrero 6000 feet (*H. H. Smith*).

We have received but one specimen of this distinct species. The antennæ are just as long as the body, and I have no doubt it is a male. All the joints of the antennæ beyond the second are elongate, the sixth and eleventh very slightly longer than the others, and nearly similar in length; first joint stout, second shorter than the third, but longer than broad. Mandibles very short, not produced; labrum small; epistomal line extremely deep; surface of the head very densely punctate; eyes free from the thoracic margin. Thorax strongly rounded in front and narrowed behind, very densely punctate, the intra-lateral carina extremely fine. Elytra not at all flattened on the disc, marked with distinct series of fine punctures, the interstices almost all similar and not punctate.

The basal joint of the tarsus, though short, is quite distinct in this species.

20. **Læmophlœus guatemalenus,** sp. n.

Haud depressus, testaceus, corpore fuscescente, nitidus; capite thoraceque crebre, vix subtiliter punctatis; elytris striato-punctatis, interstitiis æqualibus; antennis elongatis, haud clavatis.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

Of this species we have also received only a single male. It is closely allied to *L. amulæ*, but is undoubtedly distinct, the surface being shining, and the punctuation less dense and fine. The antennæ are nearly as long as the body, the terminal three joints distinctly longer, though not thicker than the others; the sixth joint is a good deal shorter than the eleventh, the third is but little longer than the second. As in *L. amulæ*, the elytra are not at all flattened, and the fine striæ between the suture and disc are separated by almost equal interstices.

21. **Læmophlœus optatus,** sp. n.

Haud depressus, fuscus, antennis pedibusque testaceis, nitidus; capite thoraceque fortiter punctatis; elytris tristriatis, stria intra-humerali profunda, interstitiis seriatim punctatis; antennis elongatis, haud clavatis.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Quiché Mountains 7000 feet (*Champion*).

Readily distinguished from *L. guatemalenus* by the larger size and by the alternate striæ of the elytra being represented only by series of fine punctures. Antennæ nearly 2 millim. long, all the joints from the third onwards elongate, the terminal three slightly longer than the preceding three. Head closely and coarsely punctured; epistomal line extremely deep; eyes convex, free behind. Thorax rounded at the sides and much narrowed behind, rather coarsely not densely punctured, very shining; intra-lateral line moderately fine. Elytra very shining, each with three distinct striæ between the shoulder and the suture, the outer one deeper than the others, the first interstice very broad and its series of punctures very fine. One specimen.

22. **Læmophlœus flavescens,** sp. n.

Haud depressus, nitidus, flavo-testaceus, elytrorum medio subinfuscato; prothorace brevissimo, crebre punctato; elytris obsolete striatis.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Allied to *L. amulæ* and *L. guatemalenus*, and like them without any flattening of the elytra. The antennæ are not quite so long as the body; the terminal three joints are distinctly longer and thicker than those preceding them; third joint a little longer than the second. Head very finely, sparingly punctured, transversely depressed behind the fine, arcuate, epistomal line; the eyes large and prominent, touching the thorax. Thorax strongly transverse, rounded in front and narrowed behind, the intra-lateral

carina very fine, the disc distinctly and moderately sparingly punctured. Elytra very shining, the striation very fine and indistinct.

I do not know the sex of the only individual we have received. It is distinguished from its immediate allies by its very fine striation. Although the striæ are, in consequence of this, not very easy of discrimination, there appear to be, as in the allies, five between the suture and shoulder, separated by equal interstices.

23. **Læmophlœus celatus,** sp. n. (Tab. XVI. fig. 20.)

Parvus, subdepressus, nitidus, flavus, obsolete punctatus; antennis filiformibus, subinfuscatis; elytris striatis, striis ad basin obsoletis, postice profundis.

Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Very similar to *L. flavescens*; but, as it is more depressed, and as the alternate striæ of the elytra are represented only by extremely fine linear punctures almost joined so as to make striæ, this species to a considerable extent connects this little group of peculiar *Læmophlœi* with the more ordinary forms of the genus. The antennæ are nearly as long as the body, very slightly thicker towards the tip, but the terminal joints are not different from the others in length or form. Head only very sparingly punctate; epistomal line distinct; eyes large, nearly touching the thorax. Thorax very short, sparingly and finely punctate; the intra-lateral carina, though fine, quite distinct. Elytra rather narrow, the intra-humeral stria deep and broad at its commencement, which, however, is distinctly behind the base, and between this and the suture, with two other striæ deep behind, but quite obsolete at the base.

The large, convex facets of the eyes are remarkable in this minute insect.

24. **Læmophlœus annectens,** sp. n.

Rufescens, subdepressus, nitidus, parce punctatus, elytris transversim fuscescentibus; antennis clavatis, medio nigris; prothorace basin versus fortiter angustato; elytris subtiliter striatis.

Long. 2 millim.

Hab. GUATEMALA, Cerro Zunil 4000 feet (*Champion*).

A small *Læmophlœus* having the appearance of *L. flavescens*, but apparently more allied to *L. alticola*, the thorax being of the form found in that group of species. Antennæ rather short, the three terminal joints longer and stouter than those preceding them; from the fourth onwards the joints are almost black in colour, but at the extremity the colour is again pallid. Head very finely punctate; epistomal line extremely deep. Thorax much narrower than the elytra, and much narrowed behind, the front margin not quite straight, the sides much rounded, the hind angles excessively small, each, as it were, forming an extremely minute denticle a little in front of the base, the intra-lateral carina fine but distinct, the punctuation scanty and fine. Elytra not deplanate, and without intra-lateral carina, each with five distinct striæ

between the suture and shoulder, the fourth one being really a series of very fine punctures; the second interstice a little broader than the others. One specimen of uncertain sex.

25. **Læmophlœus striatus,** sp. n.

Sat elongatus, minus depressus, nitidus, testaceus, fortiter punctatus; elytris profunde striatis; antennis crassiusculis, clavatis.

Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

We have received only one example of this species, and it is no doubt a female; it is readily recognized by the sculpture. Antennæ rather long and stout, the terminal three joints longer and stouter than those preceding; third joint distinctly longer than second. Head rather small, coarsely punctate, with a slightly impressed line marking off a very small epistome; labrum short, not covering the thick mandibles. Thorax rather strongly transverse, only slightly narrowed behind, coarsely punctured, with the intra-lateral stria deep and coarse. Elytra scarcely flattened on the disc, each with six striæ, separated by unequal interstices, and some of them distinctly punctured; there are a few punctures on the interstices. Underside with distinct, distant punctures.

The inequality of the striæ and their interstices is apparently due to some of the striæ being really series of interstitial punctures.

26. **Læmophlœus,** sp.

Hab. MEXICO, Real del Monte (*Flohr*).

A single female individual, allied to *L. striatus,* represents a very distinct species with remarkably coarse sculpture. Unfortunately the specimen is deformed on one side of the head and thorax.

27. **Læmophlœus insolitus,** sp. n. (Tab. XVI. fig. 21, ♀.)

Fem., subdeplanatus, nitidus, piceus, pedibus dilutioribus; antennis subclavatis; capite thoraceque sat crebre punctatis, hoc basin versus angustato, elytris multo angustiore; his profunde striatis, ad basin lateraliter costato-marginatis, interstitiis punctatis.

Long. fere 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ nearly 2 millim. long, rather thick, the terminal three joints a little thicker and longer than those preceding. Head narrower than the thorax, flat, sparingly punctate; epistomal line obsolete; vertex with a fine longitudinal line; eyes not free behind; labrum moderately prominent, not covering the mandibles. Thorax narrowed behind, a good deal rounded at the sides, the minutely prominent hind angles placed distinctly in front of the base; the intra-lateral carina somewhat elevated; the surface

finely, moderately sparingly punctate. Elytra elongate, rather flat, distinctly costate-marginate, each with well-marked striæ between the suture and costæ, the number of which it is difficult to distinguish, as the interstitial punctures form striæ when viewed in certain lights. Metasternum elongate, coarsely punctate, except in the middle.

We have received only one example, which is certainly a female. It is readily distinguished from *L. striatus* by the more depressed form, darker colour, and the different shape of the thorax, which is more narrowed behind.

28. **Læmophlœus inustus,** sp. n.

Haud deplanatus, piceus, nitidus; pedibus testaceis; antennis clavatis; prothorace elytris multo angustiore, basin versus angustato, crebre punctato; elytris elongatis, sat profunde striatis.
Long. 3 millim.

Hab. GUATEMALA, Quiché Mountains 7500 feet (*Champion*).

Although we have only one badly preserved exponent, I have no doubt of this being a distinct species; it can only be compared with *L. insolitus*, from which it differs in numerous characters. The antennæ are moderately long, rather thick, the terminal three joints distinctly thicker than those preceding. Head flat, moderately coarsely punctured; labrum small; epistomal line obsolete, distinguishable only as a fine line on each side; eyes not free behind. Thorax much narrower than the elytra, a good deal narrowed behind; intra-lateral carina moderate, the denticle placed only very slightly in front of the base; surface moderately coarsely punctate. Elytra at the extreme base with a very fine intra-lateral carina; fifth and sixth striæ only joined at the base, and there indistinctly; striæ rather coarse, interstices of unequal width, the broader with a few punctures.

29. **Læmophlœus carabinus,** sp. n.

Haud depressus, nitidus, picescens; pedibus sordide testaceis; antennis fuscescentibus, testaceis; capite thoraceque parce punctatis, hoc elytris multo angustiore, basin versus angustato; elytris subtiliter striatis, striis secundo quartoque obsoletis, quinto et sexto post basin conjunctis, interstitiis fere impunctatis.
Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Antennæ only moderately long, stout, the terminal three joints incrassate. Head flat, finely but distinctly punctured; epistomal line moderately impressed; eyes not free behind. Elytra finely striate, the second and fourth striæ conspicuously joined a little behind the base, and deeper at the point of junction. One specimen.

This species has a slight metallic lustre, and most nearly resembles *L. distans*, from which it is distinguished by numerous characters, notably by the position of the basal hind angles of the thorax.

30. **Læmophlœus corporalis,** sp. n. (Tab. XVI. fig. 22.)

Subdepressus, niger, nitidus; capite, thorace antennisque piceis; antennarum basi pedibusque sordide rufis; antennis clavatis; capite prothoraceque parce haud fortiter punctatis; elytris striatis, striis quinto et sexto post basin conjunctis.

Long. 3 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

Although resembling the preceding species almost exactly, *L. corporalis* is readily distinguished by the peculiarity that the small denticle indicating the hind angle of the thorax is placed unusually far in front of the base. Antennæ rather short and not slender, the terminal three joints a good deal incrassate. Head very flat; epistomal line distinct; the surface sparingly, subobsoletely punctate. Thorax much narrower than the elytra, much narrowed behind; the intra-lateral line fine; the punctuation like that of the head. Elytra large, transversely depressed behind the base, not in the least costate-marginate, the striæ rather fine; the sixth stria is a series of punctures, except near the base, where it joins the fifth; the second and fourth striæ are almost series of punctures. Two specimens, possibly both females.

31. **Læmophlœus frequens,** sp. n.

Haud depressus, nigro-piceus vel piceus, nitidus; capite thoraceque crebre punctatis; elytris haud costato-marginatis, evidenter striatis.

Long. 2–2½ millim.

Hab. GUATEMALA, Volcan de Agua, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

The male is larger than the female, and has much longer antennæ. In the former sex the second joint is unusually elongate, and the terminal three joints are scarcely so long as those preceding, but are just perceptibly stouter and rather differently shaped; the epistomal line is quite distinct; and there is a fine longitudinal line on the vertex. The surface of the head is shining, moderately coarsely and closely punctate. The thorax is strongly transverse, rather abruptly narrowed behind; the hind angles form a small denticle placed at the base; the intra-lateral line moderate; the surface more coarsely punctate in the male than in the female. Elytra not elongate, not flattened, with the humeral stria connected with the intra-humeral one in a very distinct manner a little behind the base, each becoming markedly deeper at the point of junction; the second interstice is broader than the others, very shining, the punctures on it excessively fine; the punctures on the third interstice more distinct.

This species varies a good deal in colour, the elytra being sometimes so pallid as to be sordid testaceous. We have fourteen examples from Panama, but only two from Guatemala; the one from the Volcan de Agua appears to be really conspecific with the examples from Panama, but the single female from Capetillo may possibly not belong

to the same species. There is also a specimen from Chiriqui that may perhaps represent another closely allied species.

32. **Læmophlœus alticola,** sp. n.

Haud deplanatus, rufo-piceus; capite thoraceque rufis; pedibus antennisque testaceis, his extrorsum fuscescentibus, clavatis; capite prothoraceque parce punctatis; elytris minus subtiliter striatis.
Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Quiché Mountains and Totonicapam 7000 to 9000 feet (*Champion*).

This species is undoubtedly allied to *L. frequens*, as the minute hind angle of the thorax is placed almost basally; there is, however, but little difference between the sexes, and the general form approximates to that of *L. corporalis*. The antennæ are moderately long, the three terminal joints forming a distinct club. The head is only sparingly punctate, the epistomal line deep and distinct; the eyes convex, almost free behind. Thorax distinctly narrower than the elytra, sparingly punctate, strongly transverse; sides rounded in front, converging behind, the minute denticle-like hind angles placed almost basally, the intra-lateral carina distinct. Elytra transversely convex, not in the least costate-marginate, deeply striate, the fifth and sixth striæ joined a little behind the base; there is some punctuation on the interstices.

Five specimens from the Quiché Mountains, of which only one is a male; it has larger mandibles and distinctly longer antennæ than the others. The example from Totonicapam is a small female with deep striation on the elytra; it is, I think, really conspecific.

33. **Læmophlœus distans,** sp. n. (Tab. XVI. fig. 23.)

Subdepressus, niger, nitidus, subæneo-micans; antennis sordide rufis; pedibus testaceis; capite prothoraceque fortiter punctatis; elytris profunde striatis.
Long. 3 millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

This species has very much the facies of a *Salpingus*, the legs being stouter than is usual in *Læmophlœus* and the sculpture less highly finished. It agrees with *L. corporalis* in the denticle of the thorax being placed evidently in front of the base, but differs considerably in sculpture. We have only three examples, and it is probable that all are males. The antennæ are rather thick, about 2 millim. long, the terminal three joints distinctly thicker than the others. Head closely and coarsely punctured; epistomal line very deep; eyes convex, free from the thorax. Thorax much narrower than the elytra, strongly narrowed behind; lateral margin and intra-lateral stria very distinct; the surface coarsely punctured. Elytra elongate, not in the least costate-marginate, deeply striate, the fifth and sixth striæ not conjoined behind the base; the first interstice broad, the others narrow.

34. **Læmophlœus recticollis.**

Læmophlœus recticollis, Reitter, Col. Hefte, xv. p. 52 (1876) (part.) [1].

Oblongus, deplanatus, tenuissime pubescens, rufus, nitidus; capite thoraceque picescentibus, sat crebre et fortiter, fere æqualiter punctatis; elytris subtiliter sex-striatis.

Long. 2 millim.

Mas, antennæ articulo primo plus minusve elongato, interdum valde elongato, sinuato, apicem versus incrassato, apice in processu curvato producto.

Hab. British Honduras, Rio Sarstoon (*Blancaneaux*); Guatemala, Cubilguitz in Vera Paz (*Champion*).—Colombia, San Carlos [1].

This species is distinguished from *L. iteratus* and *L. addendus* by its broader form, darker colour, thicker antennæ, and slight differences in the sculpture; the basal joint of the antenna of the female is both longer and thicker than it is in those species. The head and thorax are evenly, rather finely punctured. The thorax has a rather broad elevation in front of the scutellum, and there are two fine raised striæ on each side, the outer of the two not quite reaching the base; it is much broader than long, nearly straight at the sides, with the hind angles rectangular. The broad, short elytra are rounded at the tip; each has three fine striæ—one near the suture, the other two equidistant from the very fine costa that forms a margin, outside which the sides are abruptly deflexed and perpendicular.

Twenty-three specimens—three from the Rio Sarstoon, twenty from Cubilguitz.

I am indebted to M. René Oberthür for sending me Reitter's types of *L. uncicornis* and *L. recticollis* for examination. The former comes from Surinam, and appears to be very closely allied to *L. iteratus*, but I cannot at present consider it identical therewith *. The types of *L. recticollis* consist of specimens of *L. iteratus* and the present species; I assign the name to the form marked "type," which comes from the Steinheil collection and was found at Medellin. I have very little doubt that it is a female of the species of which both sexes were found by Mr. Champion in Guatemala.

35. **Læmophlœus iteratus,** sp. n. (Tab. XVI. figg. 25, ♂; 25, *a*, *b*, *c*, head and antennæ of smaller males; 26, head and antennæ of ♀.)

Oblongus, angustus, deplanatus, tenuissime pubescens, rufo-testaceus, nitidus; capite prothoraceque rufis, parce, subtiliter fere æqualiter punctatis; elytris subtiliter sex-striatis.

Long. 1½ millim.

Mas, antennæ articulo primo plus minusve elongato, interdum valde elongato, sinuato, apicem versus incrassato, apice in processu curvato, producto.

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* A large series of *L. iteratus*, found in the Islands of St. Vincent and Grenada, was named *Microbrontes uncicornis*, Reitter, by M. Grouvelle (*cf.* Trans. Ent. Soc. Lond. 1898, p. 405); but none of them agree satisfactorily with Reitter's type, which is a more elongate, rather less depressed insect, with the base of the thorax strongly elevated in front of the scutellum.

Hab. MEXICO, Villa Lerdo in Durango, Tehuantepec (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Cubilguitz, Zapote (*Champion*).—COLOMBIA (*coll. Oberthür*).

This insect is so very closely allied to *L. recticollis* that I should have had no hesitation in treating it as a slight variety thereof had we not received a good series in which there are no doubtful forms. *L. iteratus* is a little smaller than *L. recticollis* and also paler in colour, narrower, and with finer punctuation; it has the antennæ considerably thinner. We have figured the antennæ of several specimens to show the curious difference in the development of the basal joint.

Forty-seven specimens, mostly from Zapote. From Cubilguitz there is only one female, from Villa Lerdo one female, from Tehuantepec a pair, from Belize a very feebly developed male and a female.

As stated under *L. recticollis*, M. René Oberthür has sent me a specimen of the female of this species labelled by Reitter as being his *L. recticollis*. This specimen bears a locality-ticket, on which is written Araqui or some similar name. M. Oberthür's collection also contains two female examples from Colombia.

As this insect and allied species have been referred to *Microbrontes*, Reitter, it is well to state that they do not belong to that genus. *Microbrontes* was established for a Japanese insect, said to have the hind feet five-jointed in the male sex. Our species has these tarsi not more than four-jointed, possibly only three-jointed. The elongation of the basal joint of the antennæ was given as a second distinction of *Microbrontes*; but in the forms from our region that have been referred to the genus this elongation occurs only as an exceptional character in highly developed males. In this group of *Læmophlœi* it is very difficult to distinguish any structure that convinces one that the tarsi are on any of the feet more than four-jointed.

36. **Læmophlœus addendus,** s. n. (Tab. XVI. fig. 24, head, thorax, and antennæ of ♂.)

Oblongus, angustus, deplanatus, tenuissime pubescens, testaceus; capite thoraceque crebrius punctatis; elytris subtiliter sex-striatis.

Long. 2 millim.

Mas, antennæ articulo primo plus minusve elongato, interdum valde elongato, sinuato, apicem versus incrassato, apice in processu curvato producto.

Hab. GUATEMALA, Zapote, Capetillo, Balheu (*Champion*).

In this species the punctuation of the head and thorax is more developed, especially towards the sides, it being more scanty along the middle. This is almost all there is to distinguish *L. addendus* from *L. iteratus*, except that it is a little smaller. Eighteen specimens.

37. **Læmophlœus pauper,** sp. n.

Angustus, oblongus, pubescens, parum nitidus, ferrugineus; prothorace utrinque unicarinato; subtilissime punctatus, elytris obsolete striatis.
Long. $1\frac{1}{2}$ millim.

Hab. Mexico, Chilpancingo and Omilteme in Guerrero 4600 to 8000 feet (*H. H. Smith*).

This insect is extremely close to the European *L. ferrugineus*, but is only half the size, and the antennæ of the male are much more slender and hairy beneath. The punctuation is so minute as to be quite indefinite, and is still further obscured by the fine depressed pubescence. The thorax is longer than broad, a little narrowed behind; the hind angles are rectangular, the front angles not in the least prominent; the lateral stria is parallel with the side-margin and extends the whole length. The striæ of the elytra are excessively fine. The slender antennæ are in the male two-thirds and in the female fully one-half the length of the body. Four specimens.

38. **Læmophlœus dives,** sp. n. (Tab. XVII. fig. 3, ♂.)

Ferrugineus, elytris nigro-bimaculatis; capite thoraceque densissime punctatis, hoc transverso, elytris multo angustiore, lateribus crenulatis, utrinque unicarinato; elytris ad apicem evidenter costatis, subtiliter punctatis.
Long. $2\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Antennæ with the three terminal joints thicker than the others. Head narrow; eyes very prominent, free behind; epistome simply rounded in front, large but with its line of delimitation extremely obsolete. Thorax short, much narrower than the elytra, narrowed a little behind, the sides very distinctly undulate, the surface densely punctured, the carina near the sides very distinct. Elytra suboval, not deplanate, the tips extending beyond the body; very finely punctate, the intra-marginal carina distinct, but the other two costæ of each only distinct at the tip. Legs rather long, the femora projecting beyond the sides of the body.

We have only one pair of this distinct species. The antennæ of the male are much longer than those of the female.

39. **Læmophlœus minusculus.**

Læmophlœus minusculus, Grouv. Ann. Soc. Ent. Fr. 1876, p. 502, t. 9. fig. 22 [1].

Hab. Mexico, Teapa [1].

We have received nothing agreeing with this species. It is one of the smallest *Læmophlœi*—only $\frac{3}{4}$ millim. long—and possesses a very remarkable sculpture.

40. Læmophlœus pallentipennis.

Læmophlœus pallentipennis, Grouv. Ann. Soc. Ent. Fr. 1876, p. 500, t. 9. fig. 20 [1].

Hab. Central America [1].—Antilles, St. Vincent, Grenada.

According to the West-Indian specimens named by M. Grouvelle (Trans. Ent. Soc. Lond. 1898, p. 404), this insect is extremely similar to *Silvanophlœus gundlachi*, and I expect will prove to belong to that genus. It has an impunctate head and thorax, and the latter has straight sides converging behind. Two of our specimens of *S. gundlachi* from Zapote approach rather nearly to this West-Indian series, but do not agree satisfactorily.

LATHROPUS.

Lathropus, Erichson, Naturg. Ins. Deutschl. iii. p. 327 (1845).

This genus includes only three or four species of rare, very minute beetles. Its position appears to me doubtful; but I am not able to throw any light on it, or even to express an opinion as to whether the New World insects are really congeneric with the European species for which the genus was established.

1. Lathropus pictus.

Lathropus pictus, Schwarz, Proc. Am. Phil. Soc. xvii. p. 358 (1878) [1].

Hab. North America, Florida [1].—Mexico, Vera Cruz, Teapa (*Sallé*).

2. Lathropus parvulus.

Lathropus parvulus, Grouv. Ann. Soc. Ent. Fr. 1878, p. 73, t. 2. fig. 9 [1].

Hab. Mexico [1].

M. Grouvelle at first thought the examples in M. Sallé's collection that I have referred to *L. pictus* were this species, but he informs me he does not now consider this to be the case.

RHABDOPHLŒUS, gen. nov.

Coxæ posteriores tantum parum distantes, a processu acuminato separatæ.

This genus is well distinguished from *Læmophlœus* by the small size of the abdominal process projecting between the posterior coxæ. The epipleuræ are very definite. All the species possess very distinctly costate wing-cases. The head is small, and quite destitute of peculiar developments in the male. The lower lip and palpi are very small. The anterior acetabula are not closed.

1. Rhabdophlœus concolor, sp. n.

Parvus, depressus, ferrugineus, dense subtilissime punctatus et pubescens, subopacus; prothorace brevi, margine laterali crenulato, intra marginem unicostato; elytris minus alte costatis.

Long. vix 2 millim.

Hab. Mexico, Tehuantepec (*Höge*); Guatemala, Zapote (*Champion*).

The whole of the upper and under surfaces covered with a very fine dense punctuation. Antennæ moderately long and stout, distinctly longer in the male than in the female, the terminal three joints longer and rather broader than the others. Head similar in the two sexes, considerably narrower than the thorax. Thorax distinctly broader than long, scarcely narrowed behind, undulating at the sides, and with a very distinct raised costa on each side. Elytra rather long and narrow, each with three distinctly raised costæ, in addition to the slightly raised suture. Thirteen specimens from Zapote, ten from Tehuantepec.

2. **Rhabdophlœus dispar,** sp. n.

Parvus, depressus, ferrugineus, dense subtilissime punctatus et pubescens, opacus; prothorace brevi, margine laterali irregulare, intra marginem fortiter unicostato, costaque secunda utrinque; elytris argute costatis.
Long. 2 millim.

Hab. Guatemala, El Reposo, Zapote (*Champion*).

Very similar to *L. concolor*, but readily distinguished by the denser punctuation and the very strongly elevated thoracic carina; the second carina or elevation does not extend all the way to the front margin. Eight specimens.

3. **Rhabdophlœus costatus.**

Læmophlœus costatus, Grouv. Ann. Soc. Ent. Fr. 1876, p. 501, t. 9. fig. 21 [1].

Hab. Mexico, Teapa in Tabasco [1] (*H. H. Smith*); Guatemala, Zapote (*Champion*).

Mr. Champion procured a large series of this species at Zapote. It varies but little. The male antennæ are much longer than those of the female.

4. **Rhabdophlœus chiriquensis,** sp. n. (Tab. XVII. fig. 4, ♂.)

Subovalis, latus, depressus, ferrugineus, dense subtiliter punctatus; elytris fortiter costatis, costis hic inde fuscescentibus.
Long. 2 millim.

Hab. Panama, Volcan de Chiriqui, Bugaba (*Champion*).

This insect is readily distinguished from *L. costatus* by the broader and more depressed form, by the explanate margins of the elytra, and by the elongate antennæ, which, however, are considerably shorter in the female than they are in the male. We have received only three specimens.

RHINOPHLŒUS, gen. nov.

Oculi grosse granulati. Caput sat elongatum, plus minusve rostratum, sed haud angustum. Coxæ anteriores parum distantes; acetabulis haud occlusis.

This genus makes a certain approach to *Rhinomalus*, but the two are quite distinct. *Rhinophlœus* has not the narrow rostrum of *Rhinomalus*, neither has it the first joint of the antennæ elongated to an unusual extent; the parts of the mouth are much

larger than they are in *Rhinomalus*. Both genera differ from *Læmophlœus* by the more approximate front coxæ, as well as by the prosternum being slightly bent upwards behind the coxæ, whereas in *Læmophlœus* it is quite flat.

1. **Rhinophlœus productus.**

Læmophlœus productus, Grouv. Ann. Soc. Ent. Fr. 1876, p. 491, t. 8. fig. 7 [1].
Rhinomalus productus, Grouv. op. cit. 1896, p. 200 [2].

Hab. Mexico, Cordova (*Sallé*), Motzorongo (*Flohr*); Guatemala, Zapote (*Champion*). —Brazil, New Friburg [1].

Distinguished by the four-spotted elytra, comparatively short antennæ, and by the head being less rostrate, and not sinuate on each side over the insertion of the antennæ. Mr. Champion procured eight specimens at Zapote. I have seen only two examples from Mexico, and from South America none, but M. Grouvelle has identified the specimen from Cordova in the Sallé collection; it is indeed marked "type," but improperly.

2. **Rhinophlœus gracilis,** sp. n.

Testaceus, politus, fere lævigatus; antennis gracilibus extrorsum elytrorumque medio fuscescentibus.
Long. 2 millim.

Hab. Guatemala, Las Mercedes (*Champion*).

This is very different from any of the allied species, and has the eyes smaller and less coarsely faceted. The head is but little produced; it is very little sinuate at the sides; the epistomal line is distinct and angulate in the middle; the surface is very shining, and there are very few punctures. The antennæ are long and slender, with the terminal three joints a good deal thicker than the others. Thorax nearly as long as broad, much narrowed behind, the intra-lateral line quite distinct; impunctate. Elytra with the intra-humeral and sutural striæ fine, the other striæ obsolete, punctuation wanting. One specimen, in a poor state of preservation.

3. **Rhinophlœus salpingoides.**

Læmophlœus salpingoides, Grouv. Ann. Soc. Ent. Fr. 1876, p. 490, t. 8. fig. 6 [1].
Rhinomalus salpingoides, Grouv. op. cit. 1896, p. 200 [2].

Hab. Mexico, Teapa (*Sallé*); Guatemala, Zapote (*Champion*).—Brazil, New Friburg [1].

Mr. Champion procured fourteen examples of this species at Zapote; they exhibit but little variation. The antennæ are longer in some specimens, and these are no doubt males; one individual is much paler than the others, and is probably immature. The specimen from Sallé's collection is labelled "*salpingoides*" in M. Grouvelle's handwriting; it is a very large, pallid example, and is a little more sparingly punctured than the Guatemalan exponents. I have seen none from South America.

4. **Rhinophlœus nasutus,** sp. n. (Tab. XVII. fig. 5.)

Piceus, anterius dilutior, elytris flavo-bimaculatis; antennis pedibusque sordide testaceis, illis basi late testacea; capite longius rostrato, ante antennas fere longiore quam lato.

Long. 2 millim.

Hab. Mexico, Teapa (*Sallé*); Guatemala, Zapote, Pantaleon (*Champion*).

Although extremely similar to *R. salpingoides*, this species is readily distinguished by the much produced head and the more slender basal joint of the antennæ. Of the three examples from Guatemala one is a male, and has the antennæ a little longer, but there is no difference in the form of the head. There is very little punctuation or striation visible in this species: the intra-humeral stria on the elytra can be easily seen, and the sutural stria is distinct at the tip, but there are only the faintest traces of any other striæ. The only example from Mexico was labelled in the Sallé collection "*L. salpingoides*," and also "type," but I doubt whether Mr. Grouvelle ever saw this specimen; at any rate it was not labelled by him.

RHINOMALUS.

Homalirhinus, Chevrolat, Ann. Soc. Ent. Fr. ii. p. 60 (1833) (nec Ménétries, 1832).
Rhinomalus, Gemminger & Harold, Col. Hefte, vi. p. 124 (1870); Cat. Col. vii. p. 2062.
Xenorhinus, Leconte & Horn, Class. Col. N. Am. ed. 2, p. 134 (1883).

This genus is remarkable because of the elongate head, having the form of a flat beak. On this account Chevrolat placed the genus in Curculionidæ. The name *Homalirhinus* being preoccupied, Gemminger and Harold changed it to *Rhinomalus*, but referred the genus to the Heteromerous series near *Rhinosimus*. Leconte and Horn, not being aware of these facts, proposed *Xenorhinus* as a new genus of Cucujidæ.

I place at present in this genus species having the front coxal cavities closed and others having them open. This I am compelled to do, as I cannot say to which category the type-species of the genus belongs, never having seen a specimen of *R. rufirostris*, Chevrolat. I anticipate, however, that it will prove to have the coxal cavities closed, like *R. signatus*; in that case the name *Rhinomalus* will be applicable to the forms with anterior acetabula closed, and the name *Xenorhinus* can be used for *R. anthracinus* and *R. chiriquensis*, in both of which, as I have ascertained, the cavities are open.

§ 1. *Anterior coxal cavities closed; antennæ with joints* 6–11 *similar in thickness.*
(Rhinomalus.)

1. **Rhinomalus vicinus.**

Rhinomalus vicinus, Grouv. Ann. Soc. Ent. Fr. 1896, p. 197 [1].

Hab. Mexico [1], Cordova (*Sallé*).

We have received only one example. It is a small, pale *Rhinomalus*, with unusually short, pale antennæ.

2. **Rhinomalus signatus,** sp. n. (Tab. XVII. fig. 6.)

Piceus, nitidus, rostro rufo, elytris flavo-bimaculatis; antennis articulis basalibus 5 rufescentibus, articulis ultimis 6 fere æqualiter crassis, obscuris; prothorace parcissime punctato; elytris fere estriatis.
Long. 2–2¼ millim.

Hab. GUATEMALA, Chacoj in Vera Paz (*Champion*).

This insect agrees with *R. vicinus* in the fact that the terminal three joints of the antennæ do not form a club. The head is broad between the eyes, which are very large. The thorax is greatly narrowed behind, its punctures very few, the intra-lateral line quite distinct. The elytra are almost destitute of sculpture, except that the sutural stria is distinct behind. The thinner parts of the legs are yellow, the thicker parts darker.

§ 2. *Anterior coxal cavities open; antennæ clavate, joints* 9–11 *broader than the preceding.* (XENORHINUS.)

3. **Rhinomalus anthracinus,** sp. n. (Tab. XVII. fig. 7.)

Niger, nitidus, rostro, antennarum parte basali pedumque partibus tenuibus rufis; antennis articulis ultimis tribus crassioribus; prothorace punctato, linea intra-laterali tantum ad basin impressa; elytris omnium obsoletissime seriatim punctatis, estriatis.
Long. 2–2½ millim.

Hab. MEXICO (*Sallé*).

This species is readily distinguished from *R. vicinus* and *R. signatus* by the different form of the antennæ, as well as by the colour, and by the thoracic stria being much abbreviated in front. The absence of striation on the elytra is nearly complete, as I cannot trace either sutural or intra-humeral striæ; there are, however, some excessively fine punctures placed in the perfectly linear manner that indicates either rudimentary or vestigial striæ in *Læmophlœi*.

I have adopted the name from M. Sallé's collection, where this insect was labelled *Rhinomalus anthracinus*, Deyr. This species, or the following one, is probably the *Xenorhinus truquii*, Lec. and Horn (Class. Col. N. Am. ed. 2, p. 134), from "Mexico."

4. **Rhinomalus chiriquensis,** sp. n.

Niger, nitidus, rostro, antennarum parte basali pedumque partibus tenuibus rufis; antennis articulis ultimis tribus crassioribus; elytris stria intra-humerali subtili discreta.
Long. 2½ millim.

Hab. MEXICO, Forests above Jalapa (*Flohr*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

This insect chiefly differs from *R. anthracinus* by the possession of a distinct stria on each elytron. The serial punctuation is even more indistinct than it is in that species.

PARANDRITA.

Parandrita, Leconte & Horn, Class. Col. N. Amer. ed. 2, p. 133 (1883)[1].
Læmophlæus (part.), Casey, Trans. Am. Ent. Soc. xi. p. 91 (1884)[2].

Although *Parandrita* has been merged in *Læmophlæus* it appears to me that it may be treated with advantage as distinct from that genus, as well as from *Silvanophlæus*. In all the species the head is very large in comparison with the other parts of the body; the eyes are placed far in front of the thorax; and the epipleuræ are very ill-developed, being almost vertical in their anterior part and extremely attenuated behind. All the coxæ are very widely separated.

The insects of this genus appear to be extremely rare. I have not seen the North-American form for which *Parandrita* was founded, but, according to Casey, it is closely allied to our *P. capito*.

1. **Parandrita capito.**

Læmophlæus capito, Grouv. Ann. Soc. Ent. Fr. 1881, p. 94, t. 4. fig. 9[1].

Hab. MEXICO, Cordova (*Sallé*[1], *Höge*), Amula in Guerrero (*H. H. Smith*); GUATEMALA, Chiacam in Vera Paz (*Champion*).

This peculiar insect is apparently very rare, as we have altogether only four examples.

2. **Parandrita deceptor,** sp. n.

Depressus, parallelus, nitidus, niger; elytris stramineis; pedibus piceis; capite sat elongato, fortiter punctato. Long 2 millim.

Hab. GUATEMALA, Zapote (*Champion*).

Antennæ not elongate, but with the terminal three joints much longer—though not thicker—than the others. Head large, rather broader than the thorax, quite flat, coarsely punctured; the eyes rather small, but prominent and distant from the thorax. Thorax strongly transverse, as broad as the elytra, a good deal narrowed behind, the sides not denticulate; hind angles minutely acute; surface very shining, almost impunctate; the intra-lateral stria quite fine, but very distinct. Elytra small, completely covering the hind body, pallid, extremely obsoletely striate and destitute of intra-lateral costa. Legs short. Two specimens.

3. **Parandrita stipes,** sp. n. (Tab. XVII. fig. 8.)

Perdepressus, nitidus, rufo-testaceus; elytris stramineis; captite magno, fortiter punctato. Long. 2 millim.

Hab. MEXICO, Teapa (*H. H. Smith*); GUATEMALA, Pantaleon, Zapote (*Champion*).

Closely allied to *P. deceptor*, but, besides the different colour, it has a shorter hind

body, and the antennæ are altogether smaller, with a comparatively short and very slightly broader three-jointed club.

This little insect appears, like most of its congeners, to be very rare, as we have received only four specimens. The head and thorax are more or less picescent.

In the two examples from Zapote the labrum is elongate and projects over a considerable length of the mandibles; in the other two specimens it is so short that it is difficult to detect. These latter individuals agree in this respect with the other specimens I have seen of this interesting genus. I am not able to throw any light on this peculiar difference in *P. stipes*; the labrum looks as if it might possibly be movable and capable of retraction or protrusion. On the other hand, the difference may possibly be sexual, or even specific. If the latter prove to be the case the name here proposed should be applied to the form with elongate labrum, which I have selected as the type, it being the most different from its congeners. Three of our four examples were sent to M. Grouvelle, and he considered them to be all one species.

SILVANOPHLŒUS, gen. nov.

Acetabula anteriora occlusa. Corpus perdepressum. Coxæ omnes late distantes. Epipleura attenuata. Cetera fere ut in genere *Læmophlœo*.

The European *Læmophlœus testaceus* is taken as the type of this genus, which may be briefly defined as consisting of those *Læmophlœi* that have the anterior coxæ closed by an actual contiguity between the angle of the prosternal process and the tip of the prothoracic side-piece. This form of prosternum is markedly different from that of *Silvanus*, where the acetabula are separated from the mesopectus, while here they are in contact with it.

The genus will, no doubt, prove to be a composite one, but its further partition must be left till our knowledge of this very difficult group of Coleoptera is much more advanced than is the case at present.

1. Silvanophlœus nitens.

? *Læmophlœus nitens*, Leconte, Proc. Acad. Phil. vii. p. 75 [1]; Casey, Trans. Am. Ent. Soc. xi. p. 87, t. 6. fig. 9 (♂) [2].

Hab. North America [2], Colorado River, California [1].—Mexico, Cordova (*Sallé*).

We have received a single female example only of an insect belonging to the extremely difficult group of species allied to *S. testaceus*. These insects may be distinguished from *S. gundlachi* by the side of the thorax being sinuate just behind the front angle, so that the angle projects as a small tooth. I have no means to enable me to form an opinion as to whether our insect is a North-American species or not. Specimens of an allied form from South California were sent to me by the late H. K. Morrison as *Læmophlœus gundlachi*. This species they certainly are not; they are nearer to the European *S. testaceus*, but are quite distinct therefrom.

2. **Silvanophlœus gundlachi.**

Læmophlœus gundlachi, Grouv. Ann. Soc. Ent. Fr. 1876, p. 499, t. 9. fig. 19 [1].

Hab. Mexico, Atoyac (*H. H. Smith*), Motzorongo (*Flohr*), Cordova, Campeche (*Sallé*), Teapa (*Sallé, H. H. Smith*); British Honduras, Belize (*Blancaneaux*); Guatemala, Zapote, San Juan, Balheu (*Champion*); Panama, Volcan de Chiriqui (*Champion*); Central America [1].

This species is a very puzzling one, owing to the peculiar sexual characters. In one sex the terminal segment of the abdomen is more or less prolonged: as these specimens are usually larger and possess longer antennæ I conclude they are males. This abdominal character is not, however, constant; not only are the females destitute of it, but also some other examples that, from their long antennæ, I consider to be males. It appears to me, therefore, that this is a secondary male character, variable in the extent to which it may be developed.

L. politus, Woll., from the Cape Verde Islands, appears to be closely allied to this species. (*Cf.* also my remarks, anteà p. 531, on *Læmophlœus pallentipennis*.)

3. **Silvanophlœus infimus,** sp. n. (Tab. XVII. fig. 9.)

Perdepressus, sat angustus, politus, piceus; elytris stramineis, obsolete striatis; capite prothoraceque parce punctatis.

Long. 2 millim.

Hab. Guatemala, Zapote (*Champion*).

Although easily distinguished from *S. gundlachi* by the nearly black colour of the under surface, and of the head and thorax, I can find no other good distinctive characters. We have received only three specimens. There are no intermediates amongst our rather large series of *S. gundlachi*.

4. **Silvanophlœus atomarius,** sp. n.

Angustus, rufus, capite thoraceque supra nigricantibus, antennis extrorsum fuscis; politus, elytris stramineis, obsolete striatis.

Long. 1–1¼ millim.

Hab. Panama, Bugaba (*Champion*).

This is the smallest Cucujid of our region. It bears a superficial resemblance to *Læmophlœus immersus* and to *S. infimus*, but appears to be thoroughly distinct from either. The short head has no epistomal suture. The antennæ are twice as long in the male as they are in the female; in this latter sex the terminal three joints form a distinct club; the second joint is thicker but not longer than the third. Thorax not transverse, a little sinuate and narrowed at the sides behind, polished and impunctate; the fine intra-lateral carina quite distinct. Elytra narrow, not deplanate, very obsoletely striate, without intra-lateral carina. All the legs widely separated. Ten specimens. The male is twice as large as the female.

5. **Silvanophlœus fraudator,** sp. n. (Tab. XVII. fig. 10, ♂.)

Haud depressus, lævigatus, piceo-niger; elytris ante medium stramineo-maculatis; antennis basi apiceque testaceis; pedibus piceo-testaceis; prothorace elongato, basin versus angustato, utrinque posterius sub-bidenticulato.
Long. vix 2 millim.

Hab. GUATEMALA, Pantaleon (*Champion*).

Head short, epistomal line definite, marking off a very short epistome. Antennæ short and stout, not clavate, but thicker from the sixth joint onwards; joints 6–10 black, the others yellow. Thorax narrower than the elytra, much narrowed behind; at the side in front of the base with a distinct small denticle, and just in front of it a second, more obscure, minute prominence; the surface is almost impunctate, the intra-lateral line fine but distinct. Elytra very polished, extremely finely striate; the striæ not perceptible at the apex.

We have received four examples of this species. One of them is no doubt a male, as it has the head broader than the others and the antennæ a little longer.

In colour and general appearance this and the two following insects resemble certain species of *Rhinophlœus* and *Rhinomalus*, to which they do not, however, appear to be at all allied.

6. **Silvanophlœus cognatus,** sp. n.

Haud depressus, nitidus, piceo-niger; elytris ante medium stramineo-maculatis; antennis crassis, basi rufa; prothorace elongato, basin versus angustato, utrinque posterius sub-bidenticulato; elytris striatis.
Long. vix 2 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Very similar to *S. fraudator*, but readily distinguished by the striate elytra, and by the head and thorax being more distinctly punctate. The antennæ are stout, and are thickened from the fourth joint onwards. Each elytron has five or six striæ, the alternate ones being more distinct than the others. One specimen.

7. **Silvanophlœus bembidium,** sp. n.

Haud depressus, lævigatus, nitidus, niger; elytris paulo ante et post medium stramineo-maculatis; pedibus piceis; antennarum apice rufo; prothorace elongato; elytris unistriatis.
Long. 2 millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

A remarkable little insect, with polished surface almost free from sculpture, a strongly constricted thorax, and a single, well-marked, intra-humeral stria on each elytron. The colour and general form give it some resemblance to the spotted species of the subgenus *Lopha* of *Bembidium*. The antennæ are moderately long and are thickened from the fifth joint onwards; they are black, a little paler at the base, the apical joint red. Head highly polished and smooth. Thorax elongate and narrow, strongly

contracted before the posterior lateral denticle, which is prominent, very convex transversely at the constriction, so that the fine intra-lateral stria becomes there indistinct, highly polished. Elytra highly polished, with a single well-marked intra-humeral stria; black, with a pale yellow fascia, interrupted at the suture, just before the middle, and a smaller spot behind the middle. One specimen.

DEINOPHLŒUS, gen. nov.

Acetabula anteriora occlusa. Coxæ omnes late distantes. Epipleuræ latæ. Cetera fere ut in generibus *Læmophlœo* et *Silvanophlœo*.

While the species of *Parandrita* and *Silvanophlœus* have the epipleuræ very much reduced, the reverse is the case with the two extremely remarkable *Læmophlœi* for which this genus is established. They have no resemblance to any of our species of either of those genera.

1. **Deinophlœus ducalis,** sp. n. (Tab. XVII. fig. 11, ♂.)

Deplanatus, politus, piceus, elytrorum disco flavescente; antennis crassis, clavatis; prothorace basin versus angustato, lateribus argute marginatis, nullo modo denticulatis, carina intra-laterali argute elevata; elytris striatis, ad apicem costatis.

Long. $3\frac{1}{2}$–4 millim.

Mas, capite majore, epistomate medio dentibus magnis duobus liberis armato.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*); GUATEMALA, Capetillo (*Champion*).

Surface of head sparingly punctate; eyes prominent, free behind. Thorax sparingly punctate, shining, the lateral margin remarkably definite and without any trace of sinuosity or denticles. Scutellum triangular, moderately large. Elytra finely and sparingly punctate, flat, the flat portion limited by a fine raised margin; each with three striæ on the flat part, which at the extreme tip give place to short, coarse, longitudinal folds. Hind coxæ broadly separated.

This species is remarkable on account of the structure of the male head. The middle of the epistome projects as two large, free processes over the labrum. The mandibles are extremely broad at the opposed faces of their tips, and each is three-toothed there.

2. **Deinophlœus sinuatus,** sp. n. (Tab. XVII. fig. 12, apices of the elytra.)

♀. Fulvo-ferrugineus, politus, elytris flavo-bimaculatis; antennis pedibusque testaceis, illis clavatis; prothorace quadrato, lateribus rectis; elytris dorso deplanato, apice bisinuato, utrinque fortiter plicato.

Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

We have received only two examples of this remarkable insect and there is no doubt both are females. The antennæ are stout, with the apical three joints broader. The head is long and narrow, flat, very polished. Thorax a good deal narrower than the

elytra, about as long as broad, straight at the sides, very shining, sparingly punctate, the lateral carina very strongly elevated at the base. Scutellum triangular, moderate in size. Elytra quite flat on the dorsum; with intra-lateral carina, and three striæ on each elytron; the tips are a little prolonged and bisinuately truncate, the sinuation being caused by the elevation of the striæ into folds so as to leave the surface very uneven between them. Hind coxæ very widely separated.

Subfam. *ANCISTRIINÆ*, nov.

Maxillæ a genarum processibus adpressis obtectæ. Acetabula antica occlusa. Tarsi omnes 5-articulati.

The genus *Ancistria* has hitherto been placed by systematists in the subfamily Passandrinæ, the fact that the anterior acetabula are closed behind having escaped attention. This important point necessitates the separation from the Passandrinæ of this genus and those allied to it in this particular.

SYSSITOS.

Syssitos, Pascoe, MS.?

? *Scalidia*, Erichson, Naturg. Ins. Deutschl. iii. p. 305 (1848)[1].

The position of this genus is certainly next to *Ancistria*, and both possess a similar structure of the prosternum, the acetabula being also in both closed behind. The structure of the head is, however, different in the two genera. In *Ancistria* the long mandibles are curved downwards, the genal processes are prominent, and the antennæ are inserted in a deep cavity sharply defined posteriorly.

In *Syssitos* the mandibles are directed less downwards, and the under surface of the head is peculiarly deplanate, the genal processes being entirely adpressed, and there is no definite, or only an indefinite, cavity of insertion for the antennæ. There are other differences of considerable systematic importance between the two forms, one of which —the retuse elytra of *Ancistria*—may be specially mentioned, as it supplies a ready means of distinguishing the two forms at a glance.

As regards this genus, I should have been inclined to suppose that it is the one referred to by Erichson[1], when in a few words he proposed the name *Scalidia* for two S.-American undescribed species; but as the N.-American writers Leconte, Horn, and Casey place the Erichsonian genus in a small group of which they give as one of the most important characters the open anterior acetabula, this idea must be abandoned, unless it can be ascertained that they have been in error as regards the point in question.

The name of the genus *Syssitos* is due to Pascoe, who has used it in his collection for several S.-American species, but I have failed to find any trace of the name in entomological literature.

These insects appear to be of extreme rarity: we have received only four individuals to represent three species, and Casey says that *Scalidia linearis* is "quite rare." It is not, therefore, a matter for surprise that much confusion should exist. At the same time I think it only proper to again express my strong objection to establishing new genera in two or three lines (or even less), and without assigning any species to them. This course has been shown by experience to give rise to the utmost confusion.

1. **Syssitos rostratus,** sp. n. (Tab. XVI. fig. 5.)

Elongatus, subcylindricus, ferrugineus, anterius picescens, nitidus; capite canaliculato, anterius utrinque linea curvata insculpto; antennis latis, extrorsum latioribus; subtiliter punctatus, elytris leviter striato-punctatis.

Long. 7 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Antennæ thicker towards the apex, the penultimate joints strongly transverse, the terminal joint large, laterally compressed, the extremity broadly rounded. Head narrowed towards the front, sparingly punctate. Eyes elongate longitudinally. Thorax very elongate, the sides straight, but a little convergent from apex to base, the hind angles minute, definite, rectangular. Elytra elongate, with a deep sutural stria and another stria approximate to it, which is not complete but composed of punctures; outside this there are series of fine punctures; the sutural stria becomes more deeply impressed at the apex and curves round to the outside, so that a somewhat explanate margin is formed at the tip. Legs rather long; tarsi elongate.

Only one example was obtained of this remarkable insect.

2. **Syssitos longiceps,** sp. n.

Subcylindricus, castaneus, nitidus, capite canaliculato, anterius breviter bisulcato; antennis crassis; subtiliter punctatus, elytris leviter striatis.

Long. 5½ millim.

Hab. Guatemala, Panzos (*Conradt*), Torola (*Champion*).

Antennæ thick, the joints bead-like but transverse, the first joint but little longer than the others, the second smaller than any of the rest. Head elongate, finely punctate, in front finely scabrous, the side with an elongate, very fine, raised margin, the middle deeply canaliculate, and on each side in front a short, straight channel, the clypeus in front of these structures very deeply foveolate. Eyes transverse, moderately large. Thorax elongate, cylindrical in front, so that there are no prominent anterior angles, finely margined at the sides, near the base a little narrowed, the posterior angles minutely prominent, the base with a broader but more depressed margin, the surface moderately coarsely, not closely, punctate. Elytra elongate and narrow, each with four striæ and a series of punctures in place of a fifth stria; these striæ do not

extend to the apex; the suture, however, is thicker and more elevated at the apex, and the surface near it somewhat depressed. Tarsi moderately long.

The two examples received of this species are somewhat mutilated as to the front legs, but I think there is a somewhat curvate tibial spur, closely pressed to the first tarsal joint and about as long as this.

3. **Syssitos addendus,** sp. n. (Tab. XVI. fig. 4.)

Testaceo-ferrugineus, linearis; antennis piceis, sat crassis; capite anterius deflexo, medio canaliculato, utrinque minus argute sulcato; elytris striatis.
Long. 4 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Antennæ a little thickened towards the extremity, the joints bead-like, but 8–10 transverse; terminal joint compressed, with broadly rounded apex. Head moderately long, convex above, so as to be greatly deflexed in front, finely punctate, the surface of the deflexed tubercles finely scabrous. Thorax long, a little narrowed behind, hind angles extremely minute but nevertheless prominent, the punctuation rather fine and scanty. Elytra with five fine striæ, the outer one of which is reduced to disconnected punctures.

We have received only one example of this species; it probably comes nearer than our other two to the N.-American *Scalidia linearis*. From *S. rostratus* and *S. longiceps* it is readily distinguished by the deflexed front of the head, and by the mandibles not being at all porrect, but deflexed.

Subfam. *PROSTOMINÆ.*

Tarsi 4-articulati, filiformes. Acetabula antica occlusa.

The genus *Prostomis* occupies a very isolated position, as remarked by Erichson, who nevertheless placed it in the Passandrinæ. This course has been followed by Leconte and Horn and others, although they assign as a chief character of the Passandrinæ that the anterior acetabula are open, and although they are closed in *Prostomis*. Erichson gives, in his definition of *Prostomis*, "tarsi articulo primo minimo." This he did under the impression that the tarsi should be five-jointed in the Cucujidæ (with an exception as to the hind feet of the males in some genera). I cannot, however, after an examination of several species of *Prostomis*, convince myself that a minute basal joint really exists *. Whether this may prove to be the case or not is, however, of little importance to us here, as it is quite clear that *Prostomis* must, in any case, be removed from Passandrinæ, its mouth-characters and prosternal structure being so profoundly different from those of the group in question.

* In saying this I am only confirming an opinion already positively expressed by Du Val and others.

Taking for granted, then, that *Prostomis* should be removed from Passandrinæ, I associate with it an aberrant genus having also the anterior acetabula closed behind and the tarsi 4-jointed. The genus *Dryocora*, Pascoe, is a member of this subfamily. I may remark that I have only associated *Thione* with Prostominæ temporarily. If my suggestion to bring Rhizophaginæ into Cucujidæ should be adopted, then *Thione* will form a new subfamily allied to the two in question.

THIONE, gen. nov.

Corpus cylindricum, capite majore; pygidio haud obtecto. Antennæ breves, 10-articulatæ, articulo basali elongato, clava biarticulata.

Antennæ short, base not at all concealed from above; 10-jointed, club 2-jointed, the terminal joint with its apical portion pubescent and annulate; the basal joint elongate, curvate. Head very long, eyes placed near its front, epistome furcate, labrum not visible. Mandibles thick, exserted; genæ prominent, but obtuse; side of the head furnished with a depression directed downwards for the reception of the basal joint of the antennæ in repose; underside without sutures behind those connected with the trophi. The mentum is narrowed in front, the ligula elongate, the outer maxillary lobe very long and slender; the palpi rather short, with simple, slender, terminal joint. Thorax elongate; prosternum prolonged between and under the coxæ, which are thus embedded by it; coxæ small, globular so far as can be seen, their acetabula closed behind; prosternal sutures obliterated. Middle coxæ moderately distant. Hind coxæ transverse, very slightly separated by an elongate abdominal process. Abdomen with five ventral segments, which are not connate; the three middle segments equal, short, each much shorter than the basal or apical one. Elytra abbreviate. Pygidium free. Legs rather short; tarsi 4-jointed, filiform, first and second joints furnished with delicate, almost hair-like membranous processes beneath, the first longer than the second, third small but quite free, fourth elongate, quite as long as the three basal joints together.

These characters, on the whole, I consider bring the insect somewhat near to *Rhizophagus*, which genus is usually now placed in the Nitidulidæ; its position, however, should, I think, clearly be in the Cucujidæ, from which it is supposed to be distinguished by the anterior acetabula prolonged externally. The anterior acetabula are, however, prolonged externally in *Cucujus*, the typical genus of the family Cucujidæ, so that there can be no reason for excluding *Rhizophagus* on account of that character; and I am quite unable to detect any other that would justify the exclusion of these insects from Cucujidæ, where they should, however, form a distinct subfamily. If *Rhizophagus* be brought into Cucujidæ, I think *Thione* may also be placed there, but it must also form a distinct subfamily from any yet recognized, characterized by the 4-jointed tarsi, free maxillæ, closed anterior acetabula, and

obliterated prosternal sutures. For the present I associate it with *Prostomis*, to avoid multiplication of the primary divisions of the family.

The insects of this genus have been alluded to by Mr. Lewis [Ann. & Mag. Nat. Hist. (6) iv. pp. 273, 274], who, in describing the Japanese genus *Shoguna* (which he subsequently thought to be the same as *Pachycephala*, Fairm., a name more than once preoccupied), remarked that certain S.-American insects in Pascoe's collection appeared to be congeneric therewith. This, however, cannot, I think, be the case, as my friend has described, I have no doubt correctly *, the tarsi of *Shoguna* as being 5-jointed; the S.-American insects are those for which I adopt the name *Thione*, under which name they stand in Pascoe's collection, now in our National Museum, though I am unable to discover that the genus has ever been described.

1. **Thione cephalotes,** sp. n.

Subcylindricus, castaneus, nitidus; antennis pedibusque flavis; capite thoraceque parce subtiliter striolato-punctatis, illo anterius obtuse furcato; elytris leviter striatis, striis e punctis elongatis compositis.
Long. 4 millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba, Volcan de Chiriqui (*Champion*).

Head in front produced into two short obtuse processes, between which there is only a slight depression. Thorax elongate, narrowed behind, very finely margined at the sides; bearing fine distant punctures of the nature of short scratches; hind angles obtuse. Elytra slender, finely striate, the striæ at the apex becoming mere series of very fine punctures, and even on the basal portion being evidently formed in a similar manner. Legs pale yellow; tibiæ a good deal enlarged and acuminate at the tip.

2. **Thione puncticeps,** sp. n.

Subcylindricus, castaneus, nitidus; clypeo anterius impresso, vix furcato; capite crebre, fortius punctato; prothorace angusto, subtiliter parce striolato-punctato; elytris parum discrete striato-punctatis.
Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This insect is extremely similar to *T. cephalotes*, but may be distinguished by the comparatively coarsely punctured head. The punctures on the anterior part of the head are coarse and of the ordinary form, but on the posterior part they are replaced by fine striæ. The thorax is slender and is sparingly punctate, the punctures on the anterior part being elongate, while towards the base they are shorter. The head is less elongate than in either *T. cephalotes* or *T. championi*, and there are really no angular prominences in front, the appearance that exists of such being due to a deep depression

* Since my remarks were written I have, through the kindness of Mr. Lewis, had an opportunity of examining a specimen of the genus *Shoguna*. It is extremely closely allied to *Thione*, but the prosternal process is not bent upwards at the tip and the pygidium and terminal ventral segment are very elongate. I am unable to distinguish more than four joints on any of the feet.

on the middle. The sutural stria of the elytra is distinct and extends to the apex; the other striæ are formed by more or less distinctly separated punctures, and become very fragmentary on the apical part. One specimen.

3. **Thione championi**, sp. n. (Tab. XVI. fig. 6.)

Subcylindricus, castaneus, nitidus; antennis pedibusque flavis; capite prothoraceque parce subtiliter striolato-punctatis, illo anterius longius furcato, per dimidiam longitudinem sulcato; elytris striatis, striis e punctis elongatis compositis.
Long. 4–5 millim.

Hab. GUATEMALA, Cubilguitz and Panima in Vera Paz, El Tumbador, Mirandilla, Zapote, Torola (*Champion*); PANAMA, Volcan de Chiriqui, Bugaba (*Champion*).

Very similar to *T. cephalotes*, but differing as follows:—The form is more elongate, the head being so long that it appears entirely disproportionate to the prothorax; the epistomal processes are longer, and between them there is a broad groove that extends backwards, becoming gradually more obsolete, for quite half the length of the head; the striæ are more distinct than in *T. cephalotes*.

We have received a small series of this species; at first I thought it might be the other sex of *T. cephalotes*, but this does not, after examination, seem to me very probable.

Subfam. *SILVANINÆ*.

As this subfamily is usually defined by the closure of the anterior acetabula and by the tarsi being said to be simple and 5-jointed, and as I do not find these characters adequate, it is necessary to make a remark as to its definition.

The acetabula are closed in such a manner as to render support to the coxæ from the mesosternum unnecessary, and the prothorax is therefore usually less accurately co-adapted with the mesothorax, so that the closure of the acetabula is quite visible; whereas in the *Læmophlœi* it becomes only evident when the mesosternum is forcibly sundered from the prosternum.

The structure of the tarsi differs from that of the *Læmophlœi* inasmuch as the fourth joint is here subject to a great reduction, while the basal joints become more or less co-adapted and clothed with pubescence beneath. The first joint is subject to great reduction in size, as it is in *Læmophlœi*. In many cases the second and third joints of the tarsi form free lobes. This structure is found even in some species of *Silvanus*. I consequently place *Telephanus* in this subfamily, following in this respect the example of Erichson.

PLATAMUS.

Platamus, Erichson, Naturg. Ins. Deutschl. iii. p. 329, nota (1845).

This is a small genus of about six species, and is peculiar to Tropical America. Considerable confusion has occurred in connection with it, due not improbably to the fact that it was too briefly defined by Erichson, and that no species was described at the time. The genus is readily identified by the elongate hind legs, with dilated tarsi, of the males. It was placed by Erichson in the group Brontini, which has been quite properly divided by the American entomologists owing to its containing forms with closed as well as others with open acetabula. *Platamus* having the acetabula broadly closed behind comes into the Silvaninæ.

The species, like so many others in the Cucujidæ, are excessively similar; indeed, had I not seen fair series of those found in our region, I should have looked on them as mere variations. The sexes being similar to an extent variable according to the species, renders it difficult to pronounce an opinion as to a single individual. Fortunately, in the case of all the species here enumerated, we have received specimens of both sexes. They appear to be found beneath the bark of coniferous trees.

1. **Platamus mexicanus.**

Platamus mexicanus, Grouv. Ann. Soc. Ent. Fr. 1876, p. 490, t. 8. fig. 5 [1].

Hab. Mexico [1], Orizaba, Suapam (*Sallé*), Las Vigas, Amecameca (*Höge*).

The female differs from the male by the apical portion of the elytra being dull and its punctuation somewhat obliterated, as well as by the simple hind legs. As in the other species of the genus, the sexes also differ slightly in the size of the thorax and in the development of its lateral prominences.

We have received a small series varying in colour from ferruginous to black.

2. **Platamus grouvellei,** sp. n.

Depressus; prothorace elongato, crebre punctato, lateribus parum undulatis, haud denticulatis; elytris pube brevi subrecta parcius vestitis.

Mas, nitidus; elytris fortius punctatis; pedibus posterioribus elongatis, tarsis articulis duobus dilatatis, elongatis.

Fem., elytris opacis, seriatim fere subtiliter punctatis; tarsis posterioribus simplicibus.

Long. 6–6½ millim.

Hab. Mexico, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Parada (*Sallé*), Huitzo (*Höge*).

Thorax deeply, rather closely, and finely punctate; the sides in front for a short distance straight, then interrupted by a short lateral impression; behind this almost without denticulations on the lateral margin. Elytra with the punctuation obsolete at the apex.

This species differs from *P. mexicanus* by the more elongate thorax, which also is less distinctly denticulate at the sides, and by the greater sexual disparity. The male has the hind legs longer, their dilated tarsal joints very considerably longer; the female is duller, and the punctuation of the elytra is much finer than it is in the male. The species varies in colour, but in the specimens that are quite black above the ventral segments are ferruginous. Six examples are before me.

3. **Platamus difficilis,** sp. n.

Depressus, niger vel piceus, pube erecta ad latera crebrius vestitus; prothorace elongato, crebre punctato, ad latera denticulato; elytris fortiter seriatim punctatis.
Long. 7 millim.

Hab. GUATEMALA, Volcan de Agua 8500 to 10,500 feet (*Champion*).

We have received only one pair of this species, which after comparison I am not able to consider a variety of either of the other forms here described. It is separated from *P. mexicanus* and *P. grouvellei* by the more abundant pubescence at the sides of the elytra; from *P. uniformis* by the shorter joints of the male feet, and by the fact that the elytra of the female are dull. From *P. dispar* it differs by the closer punctuation of the thorax and the much less obliterated sculpture of the wing-cases of the female.

The sides of the thorax are distinctly denticulate, the lateral margin at the front angle not incrassate. The wing-cases in the female are dull, and their punctures are somewhat smaller than those of the male. The length of the dilated joints of the male feet is about the same as in *P. mexicanus*, but the tibiæ are longer and much more pubescent.

4. **Platamus uniformis,** sp. n.

Elongatus, depressus, niger, nitidus, pube erecta ad latera crebrius vestitus; prothorace elongato, crebrius fortiter punctato, ad latera obtuse denticulato; elytris fortiter seriatim punctatis.
Long. $6\frac{1}{2}$–7 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ elongate, setose, piceous-black, ferruginous towards the extremity. Thorax more closely punctate than in the other species of the genus, elongate. The elytra are elongate, and the punctures are coarser than they are in *P. grouvellei*, but become fine and obsolete at the tip. The dilated joints of the male hind foot are not elongate; there is but little difference in sculpture between the sexes.

We have received seven examples of this species, one only of which is a male. The difference in the sculpture of the elytra of the two sexes is less than it is in either of our other species. The male may be readily distinguished from that of *P. grouvellei* by the shorter dilated joints of the feet, and the female may be identified by the shining

elytra. Both sexes have a more abundant pubescence at the sides of the elytra. In *P. grouvellei* the lateral margin at the front angle of the thorax is incrassate; it is not so in *P. uniformis*.

5. **Platamus dispar,** sp. n. (Tab. XVII. figg. 13, ♂; 13 *a*, hind foot, ♂; 14, ♀.)

Depressus, niger; prothorace magno, minus dense et fortiter punctato, ad latera irregulari.
Mas, antennis longioribus; elytris nitidis, fortiter punctatis; tarsi posterioribus articulis duobus elongatis et dilatatis.
Long. 7 millim.
Fem., elytris opacis, obsolete punctatis.
Long. 6 millim.

Hab. GUATEMALA, Totonicapam and Quiché Mountains 7000 to 10,500 feet (*Champion*).

This is readily distinguished from the other species by the diminished punctuation of the prothorax and by the great disparity between the sexes. The dilated joints of the male foot are elongate, as in *P. grouvellei*. We have received a good series, exhibiting very little variation. They were found under the bark of pines.

EUPLATAMUS, gen. nov.

Corpus depressum, pubescens. Antennæ lineares, articulo basali sat elongato. Genæ subtus spinosæ. Palpi maxillares articulo ultimo haud securiforme, parvo. Coxæ omnes approximatæ, haud contiguæ. Tarsi brevissimi, lati, quinque-articulati, articulo basali perbrevi, articulis secundo tertioque brevibus, lobatis, articulo quarto minimo, articulo quinto elongato, unguiculis minutis.

Euplatamus is established for some very rare insects connecting *Platamus* with *Cryptamorpha*. Although differing much in facies from *Cryptamorpha* on account of the depressed form, I think the place of *Euplatamus* is certainly next the genus just named. It will be best distinguished therefrom by the lobes of the tarsi being entire, not divided, and by the prominent subspinose angles of the genæ. The tarsi appear to be only 4-jointed: this arises from the minute fourth joint being inserted near the base of the elongate third joint. The first joint is very short on the upperside, longer below and there hairy; the second and third joints are fairly similar in form, each has the joint following it inserted near the base, the joint itself being prolonged beneath and grooved above.

1. **Euplatamus debilis,** sp. n. (Tab. XVII. fig. 15, var.)

Depressus, piceus, parce pubescens, nitidus, antennarum basi pedibusque rufis; elytris sordide testaceis, seriatim fortiter punctatis.
Long. $3\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*); NICARAGUA, Chontales (*Janson*).

First joint of antenna large, oval, longer than the two following together; joints 6–11 a little broader than joints 2–5, terminal joint elongate, pointed. Head broad

and short, abruptly narrowed behind, but with the neck very broad; epistome narrow; surface shining, sparingly punctate, with a fine carina extending from the antenna to the vertex along the inner margin of the eye, and in the middle with two longitudinal striæ extending from the epistome to near the vertex. Thorax about as long as broad, a little narrowed behind, with six denticles at the side; surface rather coarsely and closely punctured, slightly bi-impressed on each side; the two middle depressions connected behind by a very feeble transverse depression. Scutellum very broad. Elytra with very regular rows of moderately large punctures separated by narrow interstices.

We have received two specimens from Nicaragua, one of which is very immature and badly preserved. There is only one example from Belize, and it is by no means clear that it does not belong to a different species, as it differs a little from the type in almost all the details of colour, sculpture, and form. We have figured this variety.

2. **Euplatamus humeralis,** sp. n.

Depressus, niger, nitidus, antennarum basi rufa; pedibus piceo-testaceis; elytris plaga magna basali flava, seriatim regulariter punctatis, seriebus ante apicem desinentibus.

Long. $3\frac{1}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Closely allied to *E. debilis*, but, besides the colour differences, the punctuation is more effaced on the apical portion of the elytra. There is no pubescence on our specimens of *E. humeralis*, but, as they are badly preserved, this may be due to abrasion. Two examples.

3. **Euplatamus longicornis,** sp. n. (Tab. XVII. fig. 16.)

Elongatus, depressus, pubescens, niger; pedibus testaceis; elytris fuscis; dense sat fortiter punctatus; antennarum articulo basali elongato.

Long. $4\frac{1}{4}$ millim.

Hab. British Honduras, Belize (*Blancaneaux*); Panama, Volcan de Chiriqui (*Champion*).

Readily distinguished from the preceding two species by the more elongate form, and especially by the longer basal joint of the antennæ. The antennæ are altogether longer than they are in the other species of the genus; each of the joints, except the second and third, is more than twice as long as broad, and the basal joint is almost as long as the three following together.

We have received only two specimens; I doubt whether they are really conspecific. The Chiriqui example has the antennæ less elongate, yellow at the base, with the basal joint distinctly shorter and thicker than it is in the type from Belize.

TELEPHANUS.

Telephanus, Erichson, Naturg. Ins. Deutschl. iii. p. 329 (1845).

The Munich Catalogue of Coleoptera includes only two species of this genus, one of which—*T. fasciatus*, Redtenbacher—has since been shown to be *Cryptamorpha desjardinsii*. This leaves the N.-American *T. velox*, for which Erichson founded the genus, the sole representative of *Telephanus*. Recently, however, numerous species from South America and Madagascar have been described by Reitter and Grouvelle, as well as three or four from our region. To these we now add ten others. The insects of this genus are fragile and difficult to secure in good condition. One of the best characters for their discrimination consists in the outstanding setæ, arranged along the contour of the body. Unfortunately these setæ, as well as the general pubescence, are very readily abraded, whereby the recognition of the closely allied species is rendered a more difficult task. The setæ on the thorax often project from small denticles, and these, fortunately, remain, even when the setæ are abraded. In the following arrangement the species in which the setæ and denticles are least developed are placed first; while we conclude with the species—*T. setulosus* and *T. sellatus*—in which they attain a development that is quite remarkable.

Mr. Champion informs me that these insects are often to be found in numbers by beating the withered, pendent leaves of Musaceous plants.

1. **Telephanus simplicicollis**, sp. n. (Tab. XVII. fig. 17.)

Flavo-testaceus, elytris plus minusve discrete bimaculatis (maculis interdum posterius prolongatis et sutura attingentibus); nitidus, parcius breviusque pubescens; prothorace fortiter punctato, lateribus tantum denticulis duobus distinctis; elytris fortiter seriatim punctatis, interstitiis parvis.

Long. 4 millim.

Hab. Mexico, Cordova (*Höge*).

This species is readily distinguished by the extremely short and scanty pubescence, and by the unusually small development of the setigerous tubercles of the thorax, the lateral margins of this part being, however, quite distinct. It is in size, form, and punctuation rather similar to *T. agilis*, but the antennæ are shorter. The thorax has a very minute denticle forming the anterior angle, and there is another small denticle just before the base; each of these bears a rather short, fine seta, but there are no setæ between them; the surface is coarsely and rather closely punctate, but is shining. The elytra are shining; their pubescence is remarkably short and scanty; there are no outstanding setæ, and no lateral denticles; the punctures are coarse, and, though serially arranged, are less regular than they are in most other species of the genus; the interstices are but small.

Höge procured a small series of this species. The dark spots on the elytra vary much, and may be entirely absent.

2. **Telephanus centralis,** sp. n.

Minus depressus, sat crebre pubescens, rufo-ferrugineus; elytris bi- vel tri-signatis, interdum immaculatis; capite thoraceque fortiter punctatis, hoc lateribus fere absque denticulis; elytris fortiter seriatim punctatis, interstitiis sat angustis.

Long. 4 millim.

Hab. GUATEMALA, Aceituno, Capetillo, Zapote, Cerro Zunil (*Champion*), Coban in Vera Paz (*Conradt*).

Var. *immaculatus*, n.

Hab. GUATEMALA, Senahu, Guatemala city (*Champion*).

Closely allied to *T. agilis*, but with the head and thorax less densely punctured, and the margins of the latter still less denticulate. *T. centralis* is also a rather narrower insect and has shorter antennæ. The unspotted varieties might, however, be readily mistaken for *T. agilis*; the spotted forms are more like *T. gracilis*.

3. **Telephanus agilis.**

Telephanus agilis, Grouv. Bull. Soc. Ent. Fr. 1877, p. lviii [1].

Hab. MEXICO, Saltillo in Coahuila (*Dr. Palmer*), Omilteme, Cuernavaca (*H. H. Smith*), Cordova (*Sallé* [1]), Jalapa (*Höge*); GUATEMALA, near the city, Capetillo, Zapote, San Gerónimo (*Champion*).

Distinguished by its uniform colour, by the coarse punctuation, and by there being several obsolete denticles on the side-margin of the thorax; these denticles are, however, often extremely indistinct.

4. **Telephanus pubescens.**

Telephanus pubescens, Grouv. Bull. Soc. Ent. Fr. 1877, p. lviii [1].

Hab. NICARAGUA, Chinandega (*Sallé* [1]).

I have seen only the type specimen. It comes so near to several of the varieties of *T. agilis* as to raise some doubt as to whether it may be truly distinct.

5. **Telephanus mexicanus,** sp. n.

Testaceus, capite prothoraceque dense sat subtiliter punctatis, hoc gracili basin versus angustato, lateribus evidenter denticulatis; elytris seriatim fortiter punctatis, longe pubescentibus.

Long. 4 millim.

Hab. MEXICO, Jalapa, Cuernavaca (*Höge*).

Antennæ long and slender, unicolorous red. Head with the eyes not large, and therefore widely distant from the vertex; the constriction of this not abrupt. Thorax rather slender and a good deal narrowed behind, closely and definitely, but somewhat finely punctured; the lateral denticles very distinct. Elytra rather closely punctured,

but with the longitudinal interstices well-marked; the punctures on the apical part much more indistinct; the pubescence moderately long. Four specimens.

Although similar in size and appearance (except as to the absence of dark marks on the elytra) to *T. gracilis*, this insect must be separated on account of the eyes being rather more distant from the vertex.

6. **Telephanus nigricollis**, sp. n.

Niger, elytris pedibusque testaceis, illis sutura angustissime nigra; abdomine fusco-testaceo; antennis variegatis; capite prothoraceque dense, minus fortiter punctatis, hoc basin versus angustato, lateribus denticulatis; elytris pubescentia elongata vestitis, seriebus punctorum majorum regularibus ornatis.
Long. 4 millim.

Hab. MEXICO, Cordova (*Sallé*), Cerro de Plumas (*Höge*), Omilteme in Guerrero 8000 feet (*H. H. Smith*); GUATEMALA, near the city, Dueñas (*Champion*).

Similar in size and form to *T. agilis*, but readily distinguished by the colour of the head and thorax and the finer punctuation of these parts. The antennæ are rather long, dark red, with the first and the penultimate three or four joints infuscate, the terminal one or two joints pallid. Head black, but with the vertex more or less red; palpi yellow. Thorax slender, a good deal narrowed behind, the punctuation dense but not obsolete, the denticles quite distinct. The elytra are clothed with long pubescence; the denticles on the base of the sides are distinct, and there is a distinct angulation of the lateral margin just behind them; the punctures are large, deep, and very regularly placed. Five specimens.

7. **Telephanus crux.**

Telephanus crux, Grouv. Ann. Soc. Ent. Fr. 1877, p. 208, t. 5. fig. 5 [1].

Hab. MEXICO (*coll. Chevrolat* [1]).

We have not received any examples of this species; it is said to be coarsely punctate, and to be in larger part black; the elytra red, with the base, suture, and a mark just behind the middle black.

8. **Telephanus gracilis**, sp. n.

Gracilis, testaceus, elytris trisignatis (signaturis interdum conjunctis); capite sat fortiter punctato; prothorace gracili, basin versus angustato, lateribus evidenter denticulatis, fortiter punctato; elytris seriatim fortiter puntatis.
Long. 4 millim.

Hab. MEXICO, Cordova (*Sallé, Höge*), Motzorongo (*Flohr*), Atoyac (*H. H. Smith*), Teapa, Tapachula (*Höge*); GUATEMALA, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*).

This is a smaller insect than *T. agilis* and considerably more slender. The three marks on the elytra are always present and are sometimes connected by a sort of V.

The punctuation of the head is not in the least rugose, and is finer than that of the thorax. The thorax is more slender than usual, and has the lateral denticles very evident.

This is apparently less rare in Mexico than most of the other species of the genus; of the series of thirty-five specimens, thirty are Mexican, one is from Guatemala, and three from Nicaragua.

9. **Telephanus gracilicornis,** sp. n. (Tab. XVII. fig. 18.)

Depressus, testaceus, capite prothoraceque parce perobsolete punctatis, fere opacis, hoc gracili, lateribus evidenter denticulatis; elytris fortiter, regulariter, seriatim punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is readily distinguished by the effaced sculpture of the head and pronotum and the slender antennæ entirely of one colour. The head is rather strongly and abruptly constricted behind. The thorax is not much more than half as broad as the elytra; it is scarcely narrowed at all from the front to just behind the middle, whence it becomes evidently narrower to the base; the lateral denticles are quite distinct. The elytra bear very regular rows of large punctures, separated by narrow interstices, and continuing distinct to very near the tip: there are three or four small denticles on the lateral margin, near the base. The submental area on the underside of the head has no distinct punctuation, but an excessively minute sculpture.

Two specimens in a rather poor state of preservation. They bear a good deal of pubescence on the apical portions of the elytra; the anterior parts of the body are almost entirely abraded.

10. **Telephanus dromioides,** sp. n. (Tab. XVII. fig. 19.)

Depressus, parvus, testaceus; capite, prothorace, elytrorum macula discoidale antennarumque articulis 6–8 nigricantibus; haud nitidus, capite prothoraceque discrete, sat fortiter punctatis, hoc denticulis lateralibus conspicuis; elytris parallelis, sat fortiter, regulariter, seriatim punctatis.

Long. $3\frac{1}{2}$–$3\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

We have received two examples only of this insect. They have lost much of their pubescence, but the species is evidently distinct. On the middle of the elytra there is a large, common, dark mark that extends along the suture both anteriorly and posteriorly. The antennæ are yellow, with three or four joints in the middle black. The eyes are large. The thorax is dull, the punctures on it are not large and are somewhat distant; it is much narrowed behind; the denticles at the sides are unusually distinct. The punctuation of the elytra is extremely regular; the punctures are not large, but the interstices are not so large as the punctures.

11. **Telephanus fallax.**

Telephanus fallax, Grouv. Ann. Soc. Ent. Fr. 1880, p. 171, t. 5. fig. 4 [1].

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*), Cordova (*Sallé*, *Höge*); GUATEMALA, Coban (*Conradt*), San Gerónimo, Aceituno (*Champion*).—COLOMBIA, Muzo [1].

This species is distinguished by the finer sculpture from nearly all its congeners. The sculpture on the head and thorax is excessively dense and fine, the surface thus appearing quite dull; and the punctures on the elytra are small, and separated by unusually definite flat interstices, so that they form extremely regular series. The head is broad, much constricted behind the eyes; the minute denticles at the sides of the thorax are quite distinct.

The small series before me exhibits great variety. One form, from Cordova, was thought by M. Grouvelle possibly to represent a distinct species, but in view of the great variation exhibited by other specimens I cannot separate it. The most variable points are the colour of the antennæ, head and thorax, and of the pubescence. There is also considerable difference in the sculpture.

12. **Telephanus brontoides,** sp. n. (Tab. XVII. fig. 20.)

Nigricans vel fuscus, deplanatus, pedibus et apice antennarum testaceis; fortiter punctatus, haud nitidus, setis erectis conspicue vestitus.

Long. 5 millim.

Hab. MEXICO, Cordova (*Sallé*); BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, San Gerónimo, Tocoy, Pantaleon (*Champion*); NICARAGUA, Chontales (*Belt*).

This species is readily distinguished by the larger size, dark colour, and the conspicuous outstanding setæ. Head and thorax coarsely and densely punctured, the denticles at the margins of the latter distinct, each bearing a long, outstanding, black seta. Elytra very flat, the lateral setæ very distinct, with rows of large and regular punctures, which are only somewhat finer on the apical part. Terminal segment of abdomen with a large semicircular impression, the margin of which is set with long thick setæ. Twelve specimens.

13. **Telephanus setulosus,** sp. n. (Tab. XVII. fig. 21.)

Testaceus, corporis limbo setis rigidis armato; prothorace minus gracili, crebre sat fortiter punctato, basin versus angustato; elytris seriatim fortiter punctatis, interstitiis parvis.

Long. $3\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*, *Höge*), Motzorongo (*Flohr*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Zapote, Coatepeque (*Champion*).

Antennæ moderately long, entirely red. Head rather short, much constricted

behind the eyes. Thorax a good deal narrowed behind, not much longer than broad, rather coarsely and closely punctured, the sides rendered irregular by the numerous denticles, on which there are implanted rigid, red setæ. Elytra coarsely punctate, but the punctuation on the posterior part finer and much less definite; pubescent, the lateral margins set with numerous rigid, red setæ.

This species and *T. sellatus* are readily distinguished by the numerous and conspicuous setæ. They are apparently allied to *T. paradoxus*, Reitter, which, however, I have not seen. Unfortunately the setæ are very easily removed; hence most of the nine specimens we have received are in bad condition.

14. **Telephanus sellatus,** sp. n.

Minus depressus, pubescens, corporis limbo setis rigidis armato; rufus, prothorace dorso nigricante, elytris medio plaga magna nigra; capite prothoraceque crebre fortiter punctatis, hoc basin versus angustato; elytris regulariter, seriatim, profunde punctatis.

Long. 4 millim.

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*); GUATEMALA, Panima in Vera Paz (*Champion*).

Readily distinguished (independently of the colour, which probably will prove to be variable) from *T. setulosus* by the very regular arrangement of the serial punctures on the elytra. The antennæ are moderately long and slender. The head is broad and short, coarsely punctate; the eyes are large and extend nearly to the back of the head. The thorax is a good deal narrowed behind, and the numerous setigerous denticles are very distinct. The elytra are rather narrow, parallel, with extremely regular rows of very definite punctures, with narrow interstices; on the basal part of the lateral margin there are numerous very minute denticles: these are best seen from beneath. The legs are rather short.

NAUSIBIUS.

Nausibius, Redtenbacher, Fauna Austriaca, ii. p. 998 (1858).

A small genus of American insects, one of the species having been widely distributed by commerce.

1. **Nausibius clavicornis.**

Cucujus clavicornis, Kugel. Neuest. Mag. Ent. p. 571 [1].
Nausibius dentatus (auct.), Casey, Trans. Am. Ent. Soc. xi. p. 74, t. 4. fig. 9 [2].

Hab. MEXICO, Tapachula (*Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Cerro Zunil (*Champion*); NICARAGUA, Chontales (*Janson*).

A cosmopolitan species.

2. **Nausibius brevicornis,** sp. n. (Tab. XVII. fig. 22.)

Opacus, densissime, minus subtiliter punctatus, niger; elytris, pedibus antennisque piceis; prothorace lateribus obtuse subdentatis, elytris interstitiis subtiliter elevatis; antennis ab oculis distantibus, brevibus, articulo ultimo parvo.

Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Shorter than *N. clavicornis* and readily distinguished by the very dense, coarse punctuation of the thorax. The antennæ are unusually short, stout, inserted near the front of the head, the terminal joint very much narrower than that preceding it. Thorax rather longer than broad, the base much produced in the middle, the sides undulating so as to form five or six extremely obtuse prominences; the punctuation coarse, extremely dense, the surface almost unimpressed. Elytra with the sculpture extremely dense and indefinite, as in *N. clavicornis*; the outer interstices very distinctly elevated. Legs short; hind femora thick. One specimen.

This species agrees in many respects with the description of *N. repandus*, Lec., but the punctuation appears to be quite different.

3. **Nausibius grouvellei,** sp. n.

Sat elongatus, haud depressus, subnitidus, niger; antennis pedibusque piceis; elytris fusco-rufescentibus; prothorace crebre subtiliter sed argute punctato, lateribus parum profunde crenulatis; elytris tantum interstitiis duobus intra-lateralibus subtiliter elevatis.

Long. 3 millim.

Hab. PANAMA, Bugaba (*Champion*).

Similar in form to *N. brevicornis*, but readily distinguished by the entirely different thoracic punctuation: this consists of fine but definite punctures placed on a shining surface. Antennæ short and stout, the penultimate two joints very strongly transverse. Eyes moderate, placed at the posterior angles of the head, the antennæ inserted halfway between them and the front of the epistome. Thorax elongate, crenulate at the sides, and with the front angles very distinctly prominent, the surface distinctly bi-impressed in front of the base. Elytra finely pubescent, seriately punctate, only the interstices on the deflexed sides distinctly elevated. Hind femora very thick. Two specimens.

4. **Nausibius silvanoides,** sp. n. (Tab. XVII. fig. 23.)

Angustus, dorso deplanato; fuscus, elytris, antennis pedibusque sordide ferrugineis; capite prothoraceque densissime punctatis, opacis, hoc lateribus vix perspicue crenulatis; elytris interstitiis haud elevatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Eyes rather small; antennæ inserted halfway between them and the front of the epistome, tenth joint a little broader than the preceding or the terminal joint. Thorax

elongate, parallel-sided, but with a very indistinct waving or crenulation of the sides, the base much produced ; surface very densely sculptured, opaque, with traces of two longitudinal impressions along the middle. Elytra very narrow, the sculpture dense and fine, seriate. Two specimens.

This little *Nausibius* is nearest to *N. elongatus*, Grouv., but that species is $5\frac{1}{2}$ millim. long. The narrow form of this insect gives it some resemblance to *Cathartus*, but the sculpture is like that of the *Silvani* of the *S. bidentatus* group.

SYNOBIUS, gen. nov.

Antennæ glabræ, parum clavatæ. Epipleuræ latæ. Tarsi articulis tribus basalibus sat latis.

I am obliged to establish a new genus for a single insect apparently allied to *Nausibius*, *Cathartus*, and *Hapalips*. It departs entirely from *Cathartus* by the broad epipleuræ, and from both it and *Nausibius* by the structure of the feet, which are but little different from those of *Hapalips*, there being three joints at the base, equally and moderately broad, then a very small fourth joint, and a terminal joint not quite so long as the three basal joints; but the greatest peculiarity of the genus is the peculiar, glabrous, rigid antennæ. The structure of the sterna is that normal in the Silvanides.

1. **Synobius lobicollis,** sp. n. (Tab. XVII. fig. 24.)

Latiusculus, subdepressus, piceo-castaneus; prothorace angulis anterioribus lobato-productis, marginibus lateralibus argute elevatis, subrectis; elytris densissime subtiliter sculpturatis, brevissime pubescentibus. Long. $4\frac{1}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ piceous, shining, nearly rigid, each joint of the elongate, narrow, 3-jointed club longer than broad, the terminal joint small, only half as long and half as broad as that preceding it. Head broadly and rather deeply transversely impressed just in front of the eyes, which are small. Thorax quadrate, very slightly broader behind, base truncate, not produced in the middle, the sides slightly irregular, the front angle furnished with a large lobe projecting forwards and looking as if intended for a shield or protection to the eyes. Elytra rather broad, the sculpture little more than a roughness due to the insertion of the very numerous, fine and minute, short, depressed hairs. Legs short.

I anticipate that this curious insect will prove to be myrmecophilous or termitophilous in habits.

CATHARTUS.

Cathartus, Reiche, Ann. Soc. Ent. Fr. 1854, p. 77.

Reiche referred this genus to the Colydiidæ. It is, however, extremely close to *Silvanus*, and no satisfactory way of distinguishing the two genera has been pointed

out, so far as I am aware. Numerous species have since the establishment of the genus been referred to it and to *Silvanus*, but, as it appears to me, in an arbitrary manner. I think, perhaps, it would be better to sink the genus altogether; but as a satisfactory study of these difficult forms will probably result in the establishment of several genera, there can be no harm arising from the course I here adopt of limiting *Cathartus* to its original species and one very closely allied to it.

I may add that Reitter (Verh. zool.-bot. Ges. Wien, 1879, p. 82) distinguished the two genera in question as follows, viz. :—

Joints of the club of antenna of one width	*Silvanus.*
The first, or the last, joint of the club smaller	*Cathartus.*

1. **Cathartus cassiæ.** (Tab. XVII. fig. 25, ♂.)

Cathartus cassiæ, Reiche, Ann. Soc. Ent. Fr. 1854, p. 78[1].
Sylvanus gemellatus, Jacq.-Duv. in Sagra's Hist. fis. polit. y nat. de Cuba, Ins. p. 104[2].
Cathartus gemellatus, Reitter, Col. Hefte, xv. p. 126[3].

Hab. Mexico[1], Tuxtla (*Sallé*), Tapachula, San Juan Bautista, Teapa (*Höge*); Guatemala, El Tumbador, El Reposo, Cahabon, San Juan, Chiacam, Cubilguitz, San Gerónimo, Senahu (*Champion*), Coban (*Conradt*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).—Cuba[1 2].

This species is carried about with the seeds of *Cassia fistula* *, as reported by Reiche[1]. It varies a great deal in the development of the male, in which sex the hind legs are much elongated in the larger individuals. *C. gemellatus*, Duval, is apparently founded on small examples, in which, as is frequently the case in Cucujidæ, the sculpture is a little less definite than it is in the large forms. The elongation of the thorax is also an extremely variable character and our series shows that no line can be drawn between these two supposed species.

2. **Cathartus annectens,** sp. n.

Parallelus, subdepressus, sordide testaceus; capite prothoraceque obsolete punctatis, hoc lateribus rectis, angulis anterioribus minus longe lobatis; elytris densissime punctatis, opacis.
Long. $3\frac{1}{4}$ millim.

Hab. British Honduras, Rio Hondo (*Blancaneaux*).

Extremely similar to moderate-sized examples of *C. cassiæ*, but with the elytra sculptured more like those of *Nausibius* and the typical *Silvani*; also with the anterior angle of the thorax lobed and exhibiting an impression in front. We have received only one example and it is of doubtful sex, the hind legs being short, but with the femora a good deal incrassate. The eyes are large, and placed contiguous with the thorax. The antennæ are formed like those of *C. cassiæ*, the ninth joint being

* A plant cultivated at Vera Cruz and Campeche (*cf.* Biol. Centr.-Amer., Botany, i. p. 330).

greatly broader than the eighth, and the eleventh being smaller than the tenth and not so distinctly disconnected from it as usual. The punctuation of the elongate, straight-sided thorax is extremely obsolete, and there is a vague depression at the base in the middle. The elytra are in colour and form like those of *Nausibius*, and are covered with a dense, seriate subangulose sculpture, amongst which no definite punctures can be detected; the sutural stria is distinct only at the tip.

SILVANUS.

Silvanus, Latreille, Gen. Crust. et Ins. iii. p. 19 (1807).

This genus includes a variety of species, several of which are found in food-stuffs, and are therefore more or less nearly cosmopolitan.

1. **Silvanus surinamensis.**

Dermestes surinamensis, Linn. Syst. Nat. i. 2, p. 565 [1].

Hab. GUATEMALA, Rio Maria Linda (*Champion*).—SOUTH AMERICA, Surinam [1].

Cosmopolitan.

2. **Silvanus muticus**, sp. n.

Ferrugineus, opacus, subdepressus, densissime sculpturatus; capite post oculos omnium minutissime spinosis; prothorace basin versus angustato, dorso longitudinaliter late bi-impresso, angulis anterioribus bene productis, obliquis.

Long. 3 millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

There are in the Mediterranean region two forms mixed under the name of *Silvanus bidentatus*. *S. muticus* resembles them extremely, but is distinguished from both by the fact that the head is almost destitute of a spine behind the eyes. This character readily distinguishes *S. muticus* from the Central-European *S. bidentatus*: the Mediterranean form has the tooth smaller than the Central-European form, but still larger than it is in *S. muticus*; it, moreover, has the thorax nearly unimpressed and is a little narrower and less depressed. I think *S. muticus* represents a distinct species of this difficult group, though I have only a single example to deal with.

3. **Silvanus guatemalenus**, sp. n.

Ferrugineus, opacus, subdepressus, latiusculus, densissime sculpturatus; capite post oculos inerme; prothorace basin versus leviter angustato, angulis anterioribus bene antrorsum productis.

Long. $3\frac{1}{4}$–$3\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city, Capetillo, Cerro Zunil, San Gerónimo (*Champion*).

This is another very close ally of *S. bidentatus*, and is the largest—especially the broadest—insect I have seen of the group. The antennæ are rather longer and thicker

than in the allied forms, the sixth joint longer than broad. There is no spine behind the eyes, which extend very nearly to the hind margin of the head. The thorax is rather deeply sinuate on the front margin behind the eye, and the front angle projects a good deal forwards, but scarcely at all outwards; the surface is unusually coarsely rugose, and only by minute examination can any trace of longitudinal impressions be found. Nine specimens.

It may be well to mention that the late H. K. Morrison sent me from Arizona an insect allied to *S. guatemalenus*, but with shorter elytra and differing in several other respects, as *S. bidentatus*. Our editors also received a specimen of the same species from Morrison labelled as coming from Northern Sonora. This locality is, I think, open to doubt.

4. **Silvanus vulgaris.**

Silvanus vulgaris, Grouv. Ann. Soc. Ent. Fr. 1878, p. 74, t. 2. fig. 11 [1].

Hab. MEXICO, Cordova (*Sallé* [1]); GUATEMALA, El Tumbador, Zapote, San Gerónimo, Balheu, Purula, Senahu (*Champion*).

We have received a good series of this species. In it the anterior margin of the thorax is not in the least sinuate behind the eye, and the front angle is slightly prominent exteriorly, but not in the least anteriorly.

5. **Silvanus trivialis.**

Silvanus trivialis, Grouv. Ann. Soc. Ent. Fr. 1878, p. 75, t. 2. fig. 13 [1]; Champ. Trans. Ent. Soc. Lond. 1898, p. 406 [2].

Hab. MEXICO, Motzorongo (*Flohr*), Teapa (*H. H. Smith*); BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, Zapote, Senahu (*Champion*).—SOUTH AMERICA, Brazil [1]; ANTILLES, St. Vincent, Grenada [2].

6. **Silvanus nitidus.**

Cathartus nitidus, Grouv. Ann. Soc. Ent. Fr. 1889, p. 162, t. 6. fig. 6 [1].

Hab. MEXICO, Motzorongo (*Flohr*), Cordova (*Höge*), Teapa (*H. H. Smith*); GUATEMALA, Zapote, San Juan, Senahu (*Champion*).—VENEZUELA, Caracas [1].

7. **Silvanus consors,** sp. n. (Tab. XVII. fig. 26.)

Haud depressus, subnitidus, discrete punctatus, ferrugineus; oculis convexis, liberis; prothorace subquadrato, lateribus utrinque post angulum anteriorem parum prominulum leviter sinuatis; elytris seriatim punctatis. Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, near the city (*Champion*).

Antennæ rather small, joints 4–8 subequal, 9–11 forming an abrupt rather large club. Head short. Thorax about as long as broad, the front margin nearly straight, the anterior angles projecting a little externally, the sides slightly narrowed behind; rather closely and distinctly punctured. Elytra broader than the thorax, with distinct

series of punctures becoming obsolete at the tip. Coxal lines large, extending to the hind margin of the first abdominal segment. A good series has been received.

This insect is closely allied to *Cathartus nitidus*, Grouv., but is considerably larger and more closely punctate.

8. **Silvanus perforatus,** sp. n. (Tab. XVII. fig. 27.)

Convexus, ferrugineus, elytris vage nigro-bimaculatis, pubescens; capite post oculos spinoso; prothorace antrorsum profunde constricto; elytris seriatim punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Tapachula (*Höge*); GUATEMALA, Senahu, San Gerónimo (*Champion*); PANAMA, David (*Champion*).

Var. *concolor*, var. n. Prothorace dense punctato, elytris immaculatis.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This species is distinguished by the peculiar form of the thorax, and the excessively dense punctuation of the under surface of the head. The head is short and broad, rather coarsely punctate above, with a very distinct acute denticle behind the eyes; the antennæ are abruptly clubbed, the terminal joint being almost spherical. Thorax rather small, the front margin projecting very slightly at each side, so that behind it there is a short constriction; the lateral margin finely crenulate, a little narrowed behind; the surface somewhat shining, bearing fine and large punctures, and with a smooth space along the middle. Elytra pubescent, with regular rows of punctures, obsolete behind. Six specimens, no two of which quite agree, and this makes me doubtful as to whether the individual from San Gerónimo with densely punctate thorax is really distinct.

9. **Silvanus signatus.**

Silvanus signatus, Frauenf. Verh. zool.-bot. Ges. Wien, xvii. p. 438, t. 121. fig. 28 [1]; Champ. Trans. Ent. Soc. Lond. 1898, p. 406 (*S. fasciatus*) [2].

Cathartus fascipennis, Reitter, Col. Hefte, xv. p. 129 [3].

Hab. MEXICO, Teapa (*H. H. Smith*); NICARAGUA, Chontales (*Janson*).—ANTILLES, St. Vincent, Grenada [2].

We have received only two examples of this species; it appears to be distributed widely in the eastern and western hemispheres, and has been found on board ship. It is distinguished from its allies by having the sides of the thorax setigerous.

10. **Silvanus angulicollis.**

Cathartus angulicollis, Reitter, Verh. zool.-bot. Ges. Wien, xxviii. p. 194 [1]; Champ. Trans. Ent. Soc. Lond. 1898, p. 407 [2].

Hab. GUATEMALA, San Gerónimo (*Champion*).—COLOMBIA [1]; ANTILLES, Grenada [2].

Mr. Champion found a good series of this species. I am indebted for its name to M. Grouvelle; Reitter's description is not at all characteristic.

11. **Silvanus advena.**

Cryptophagus advena, Waltl, Faunus, i. p. 169 (1832) [1].
Cathartus advena, auct.

Hab. MEXICO, Teapa (*H. H. Smith*); GUATEMALA, Dueñas, Chiacam (*Champion*); NICARAGUA, Chontales (*Janson*): PANAMA, Volcan de Chiriqui (*Champion*).—ANTILLES, Grenada.

12. **Silvanus quadricollis.**

Silvanus quadricollis, Guérin, Icon. Règne Anim., Ins. iii. p. 198 [1]; Casey, Trans. Am. Ent. Soc. xi. p. 72, t. 4. fig. 5 [2].
Cathartus quadricollis, Reitter, Col. Hefte, xv. p. 128 [3]; Champ. Trans. Ent. Soc. Lond. 1898, p. 406 [4].

Hab. NORTH AMERICA [1 2].—MEXICO, Motzorongo (*Flohr*), Campeche (*Sallé*); GUATEMALA, Senahu, Zapote, Cerro Zunil, Capetillo (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui (*Champion*).—ANTILLES, St. Vincent and Grenada [4].

13. **Silvanus excisus.**

Cathartus excisus, Reitter, Col. Hefte, xv. p. 128 [1].

Hab. GUATEMALA, Zapote (*Champion*).—EAST INDIES [1]; EUROPE [1].

Fam. MONOTOMIDÆ *.

This is a small group of Coleoptera consisting of somewhat less than 100 species. On a preceding page (p. 500) I intimated my opinion that at least a part of this family should be placed in Cucujidæ. Since then Dr. Ganglbauer, though not acquainted with my statement, has treated Monotomidæ as a subfamily of Cucujidæ. My recent study quite confirms this view, and also convinces me that the *Europs*-forms are really allied to *Monotoma* proper, notwithstanding the great difference in superficial appearance.

The subfamily Monotominæ is also undoubtedly allied to Rhizophaginæ, and is connected therewith to a certain extent by the interesting genus *Aneurops*, described below. The two subfamilies remain distinct, as the Rhizophaginæ have antennal grooves on the underside of the head, and their anterior acetabula are strongly transverse.

Upwards of thirty species are recorded in the following pages. Of this number only five have been previously described. Of all of the latter I have seen typical specimens, M. René Oberthür having been so kind as to communicate to me the series of Reitter's types of Mexican Monotomidæ.

* By D. SHARP.

Subfam. *MONOTOMINÆ.*

MONOTOMA.

Monotoma, Herbst, Käfer, v. p. 22 (1793).

About thirty species are known of this genus, which has a wide distribution in both the Old and New Worlds. None have hitherto been recorded from our region, where, however, three species have been discovered by Mr. Champion.

1. **Monotoma centralis,** sp. n.

Fusca vel testacea, antennis pedibusque rufis; parum elongata; capite prothoraceque dense, fortius punctatis, opacis, hoc subquadrato, basi in medio bifoveolata; elytris seriatim punctatis, setosis, apicem versus haud omnino opacis.

Long. $2\frac{1}{4}$–$2\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, near the city, Zapote, Capetillo, Dueñas, San Gerónimo (*Champion*).

Extremely similar to the European *M. brevicollis*, Aubé, but rather broader and with the antennæ a little larger. Head broad and short, feebly bi-impressed; densely sculptured, opaque. Thorax as broad as long, only very slightly narrowed in front, at the base with two distant foveæ; very coarsely punctate and clothed with rather long setæ. Elytra unusually broad in proportion to their length, with the sculpture and clothing almost as in *M. brevicollis*, but rather coarser.

Many specimens from Guatemala, but only one from Mexico. The male has a slight flattening of the middle of the last ventral plate.

M. Oberthür has sent me an insect allied to *M. centralis*, labelled "*M. latridioides*, Reitter, Colombia." I cannot find a description of this species, but may mention that it differs from *M. centralis* by the narrower thorax, coarser punctuation, and the very large setæ on the elytra.

2. **Monotoma munda,** sp. n.

Testaceo-ferruginea, opaca, brevissime setosa; prothorace anguste subquadrato, minus fortiter punctato, basi vix perspicue bifoveolata; elytris seriatim sculpturatis.

Long. 2 millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Extremely similar in form to *M. centralis*, but readily distinguished by the less coarse sculpture, the short setosity, and the different male characters. In that sex the terminal segment projects somewhat downwards, and its ventral surface is broadly and deeply impressed. The female has only a small obscure impression on the last ventral plate. One pair.

In size and shape this insect almost exactly resembles a small form of *M. brevicollis*, Aubé, that occurs in Britain.

Obs.—In M. Sallé's collection there is a specimen of the female sex of a *Monotoma* labelled "Mexico," without other indication of locality. This example does not agree satisfactorily with *M. munda*, but it may be a variety of it.

3. **Monotoma pusilla,** sp. n.

Fusco-ferruginea, opaca, sat elongata, brevius setosa; prothorace suboblongo, minus grosse punctato, basi vix perspicue bifoveolata; elytris seriatim sculpturatis.

Long. $2\frac{1}{4}$ millim.

Hab. Panama, Volcan de Chiriqui 3500 to 4000 feet (*Champion*).

Extremely similar to *M. munda*, and, like it, clothed with short setæ; but *M. pusilla* is of more slender elongate form. The head is moderately long and narrow, not impressed. The thorax is slender, a little narrowed in front, and slightly sinuate just behind the front angles, which are rectangular.

The only example found is a male; it has a large deep fovea extending the whole length of the last ventral plate.

HESPEROBÆNUS.

Hesperobænus, Leconte, Classif. Col. N. Amer. ed. 1, p. 86 (1861).

This genus is doubtfully distinct from *Europs*. I have placed in it two species in which the anterior acetabula are very small and the upper surface strongly pubescent. The *Rhizophagus capito* of Fairmaire, referred to this genus by Horn and placed in it in the Munich Catalogue, is a *Europs* allied to our *E. obtusus* and *E. bilineatus*. The genus *Phyconomus*—to which Reitter referred one of our *Hesperobæni*—consists of a single N.-American species of maritime habits.

1. **Hesperobænus subtestaceus.**

Phyconomus subtestaceus (and var. *discoideus*), Reitter, Deutsche ent. Zeitschr. xx. p. 299 (1876) [1].

Depressus, opacus, rufus; elytris flavo-rufis, marginibus vage fuscescentibus; capite prothoraceque crebre fortiter punctatis, hoc dorso planato, medio area elongata, angusta, lævigata; elytris subtiliter striatis, striis seriatim pubescentibus.

Long. $2\frac{1}{2}$–3 millim.

Hab. Mexico [1] (*coll. Oberthür*), Guanajuato (*Sallé*).

Antennæ slender, ninth joint large, tenth with the pubescent apex very minute. Thorax about as long as broad, distinctly narrowed behind, the front angles depressed and a little rounded, the impunctate area along the middle small and very ill-defined, with no transverse impression. Elytra flat, narrow, and parallel, the very narrow striæ are rather deep and are made conspicuous by their pubescence; seen in one aspect, the elytra appear to be almost estriate, but to be conspicuously seriate-pubescent. The pygidium elongate, not deflexed. One pair, male and female.

This species is readily distinguished from *H. abbreviatus* (Motsch.), which I take as the type to the genus, by the obtuse anterior angles of the thorax; the colour is

evidently somewhat variable. The male is rather larger than the female and has a larger head; the terminal supplementary segment is very conspicuous.

H. subtestaceus is variable as to the colour of the elytra. I am indebted to M. René Oberthür for sending me Reitter's types; I have no doubt that the "var. ? *discoideus*" of Reitter (*l. c.*) belongs to the same species.

2. **Hesperobænus stipes,** sp. n. (Tab. XVIII. fig. 1.)

Opacus, pubescens, nigricans; capite thoraceque dense punctatis, opacis, rufo-obscuris; elytris basi rufescente, fortiter striatis, seriatim pubescentibus; antennis pedibusque rufis; prothorace area lævigata fere nulla, haud impresso.

Long. $3\frac{1}{8}$ millim.

Hab. GUATEMALA, Volcan de Agua 8500 to 10,500 feet (*Champion*).

Distinguished from *H. subtestaceus* by the less depressed form and the coarser striation of the elytra; the front angles of the thorax are very much rounded, and the sides much narrowed behind. The pygidium is elongate, moderately bent down.

We have received only one male; it is in moderately good preservation.

EUROPS.

Europs, Wollaston, Ins. Maderensia, p. 149 (1854).
Mimema, Wollaston, Journ. Ent. i. p. 135 (1861).

The insects placed in this genus show various slight distinctions in the structure of the feet and acetabula, but these characters cannot at present be considered of generic importance. Numerous species from various parts of the world have recently been added to *Europs*, of which two only are recorded in the Munich Catalogue, where the genus, in accordance with the views of Wollaston, as to its alliance with *Rhizophagus*, is placed in Nitidulidæ. I have acted on the view that *Europs* at present is distinguished from *Bactridium* by the club of the antennæ being two-jointed, the ninth joint being strongly different from the eighth.

1. **Europs rhizophagoides.**

Europs rhizophagoides, Reitter, Verh. Ver. Brünn, xi. p. 43 (1872) (excl. var. *apicalis*) [1].

Subdepressus, rufescens, corpore plus minusve infuscato; elytris stramineis, ad apicem plus minusve discrete infuscatis; prothorace ante basin transversim impresso, utrinque fortiter punctato; elytris subtiliter seriatim punctatis; pygidio parum porrecto.

Long. $2\frac{1}{2}$–3 millim.

Hab. MEXICO [1] (*coll. Oberthür*), Las Vigas (*Höge*); GUATEMALA, Aceituno, Capetillo (*Champion*), Coban (*Conradt*).

Antennæ with the ninth and tenth joints rather large. Head deeply bi-impressed in front, somewhat sparingly but distinctly punctured. Thorax subquadrate, but little narrowed posteriorly, with a small very distinct transverse impression behind, which is curved forwards on each side and soon becomes indistinct; before this there is

an impunctate space, narrower in front; elsewhere the thorax is sparingly but very distinctly punctured. Elytra straw-coloured, the suture narrowly and indistinctly black, the apex usually with a distinct angular dark mark, the area about the scutellum sometimes infuscate. Legs yellow. Pygidium of the male perpendicular. Under surface with but little sculpture.

We have received a series of fourteen individuals from Guatemala; they show that the species is somewhat variable in colour and size. I therefore treat as a variety a small specimen from Las Vigas, Mexico, with the head and thorax black and more finely punctured; and, as a second variety, a large individual from Coban, Guatemala, having the head and thorax black, and the head considerably larger than it is in typical males.

The var. *apicalis* of Reitter should, I think, be retained as a distinct species. It is of more elongate form, the punctuation is a little different, and the black mark at the tip of the elytra is quadrangular, instead of triangular, in shape.

Reitter [1] described this species as coming from Colombia and Mexico, and mentioned only the Hofmuseum, Wien, as the source from which his examples were derived. A specimen from Reitter's collection sent me by M. Oberthür, labelled by Reitter "*rhizophagoides*, m., Mexico," pertains to the species I have above described. It is clear, however, that the type of the species belongs to the Vienna Museum, and that it is probably of Colombian origin. As our species apparently does not extend beyond Guatemala, I have grave doubts if the type alluded to will prove to be the same, and I have felt strongly inclined to apply the name *restrictus* to our insect. (See also the remarks under *E. diffusus*.)

2. **Europs diffusus,** sp. n.

Brevior, parum nitidus, rufus; elytris stramineis, circa suturam ad apicem fuscis; capite thoraceque crebre punctatis, hoc ante basin transversim impresso, medio area lævigata; elytris subtiliter seriatim punctatis; pygidio parum porrecto.

Long. 2 millim.

Hab. MEXICO, Jalapa (*Höge*), Teapa (*coll. Oberthür, Sallé, H. H. Smith*); BRITISH HONDURAS (*Blancaneaux*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

This species is readily distinguished from *E. rhizophagoides* by its smaller size and brighter colour. The metasternum and first abdominal segment are considerably shorter. The male has the pygidium strongly deflexed; in the female it is more porrect, and the corresponding ventral segment is longer. Fourteen specimens.

The specimen sent by M. Oberthür has been labelled by Reitter "var. *apicalis*," but it bears very little resemblance to that variety of *E. rhizophagoides*. On the other hand, I refer, as a variety, to *E. diffusus* two Brazilian examples of small size in my own collection; they are very dull and more obsoletely punctured.

3. **Europs germari.**

Europs germari, Reitter, Deutsche ent. Zeitschr. xx. p. 300 (1876) [1].

Hab. Mexico [1] (*coll. Oberthür*).

I am indebted to M. Oberthür for an opportunity of examining this insect, of which we have not received an example; it connects *E. rhizophagoides* with the following series of species.

4. **Europs bilineatus,** sp. n.

Niger, nitidus, deplanatus, glaber; pedibus elytrisque testaceis, his apice nigro; antennis pygidioque fusco-rufis; prothorace lineis duabus discoidalibus impressis, utrinque parce subtiliter punctato; elytris seriatim punctatis.

Long. vix $2\frac{1}{2}$ millim.

Hab. Nicaragua, Chontales (*Janson*).

Antennæ rather short and stout, ninth joint strongly transverse, tenth shorter than usual. Head large, reddish in front, deeply impressed on each side anteriorly, with a few fine punctures near the eye. Thorax elongate, nearly straight at the sides, lateral margin rather fine, scarcely evidently crenate; disc with two elongate, parallel, impressed lines, which are not connected behind, but have two punctures placed between them there; at the sides with a few fine punctures. Elytra with the series of punctures fine and regular, not evanescent at the tip. Pygidium elongate, little deflexed. One specimen, male.

This distinct little species is, perhaps, our nearest ally, structurally, to the Madeiran *E. impressicollis*, Woll., the type of the genus.

5. **Europs cognatus,** sp. n.

Rufescens, nitidus, deplanatus, glaber; prothorace fusco-rufo, lineis duabus discoidalibus impressis, utrinque parce fortiter punctato; elytris seriatim punctatis.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Cerro Zunil (*Champion*).

Of this species we have also received but one specimen; it is a female. Although very closely allied to *E. bilineatus*, it is readily distinguished by the colour, and by the punctures on the head and thorax being much larger. The antennæ also have the two joints of the club rather larger.

6. **Europs illaesus,** sp. n.

Elongatus, deplanatus, niger, nitidus; antennis pedibusque rufis; elytris flavis, sutura et marginibus nigris, seriatim punctatis; prothorace irregulariter fortiter punctato, ante basin in medio profunde transversim impresso; pygidio elongato, porrecto.

Long. $2\frac{5}{8}$ millim.

Hab. Nicaragua, Chontales (*Janson*).

Head short, the vertex with numerous large punctures. Thorax almost square,

crenulation of lateral margins distinct, the surface with numerons large punctures, those about the disc arranged as a curved or horseshoe-shaped series. Elytra very distinctly seriately punctate. One specimen, female.

Although superficially similar to *E. bilineatus* in size and colour, this species differs in the shape of the head and in the punctuation, as well as in the absence of the two definite impressed lines on the thorax. The coxal lines are quite detached, and more distinct than in the other allied forms, but they do not attain the hind margin of the first ventral segment.

7. **Europs obtusus,** sp. n.

Depressus, glaber, nitidus, niger; antennis pedibusque rufis; elytris pone humeros utrinque plaga magna flava; capite prothoraceque parce subtiliter punctatis, hoc medio seriebus subregularibus duabus punctorum ante basin fere conjunctis; elytris seriatim punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

This species is intermediate between *E. bilineatus* (in which there are two definite impressed lines on the thorax) and the numerous representatives of the genus in which there is an irregular punctuation of the thorax with a smooth space in the middle. In *E. obtusus* the punctures become crowded at the edges of the smooth space, so as to be almost confluent; they are somewhat curved towards one another near the base, and between their extremities there are one or two separated punctures. The other punctures of the thorax, as well as those of the short head, are few and fine. The serial punctuation of the elytra is quite distinct, the punctures being about as large as those on the thorax. The coxal lines are evidently free at the extremity, but not so distinct as in *E. illaesus*. One specimen, female. The pygidium is moderately long, obscurely red in colour.

8. **Europs oxytelus,** sp. n. (Tab. XVIII. fig. 2.)

Parum elongatus, subdepressus, subtilius pubescens, sat nitidus, ferrugineus; prothorace medio late lævigato, ante basin vix perspicue impresso; elytris subtiliter punctato-striatis, striis subtilissime pubescentibus, interstitiis fere planis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

We have received one example of this species; it is a male. The comparatively depressed form and the very fine and short, though quite evident, pubescence distinguish it from any of the other species. The antennæ are short. The short broad head is smooth along the middle quite to the vertex, but has a few fine punctures on each side. The thorax is about as long as broad, much narrowed behind, along the middle with a broad smooth and shining space, the sides finely punctate; in front of the base there is an obscure transverse impression. The very fine punctures in the

elytral striæ bear each a very minute and short, erect hair. The pygidium is not elongate. The coxal lines, though short and strongly divergent, are detached. The tarsi are short and broad.

9. **Europs simplex,** sp. n.

Parum depressus, nitidus, haud pubescens, ferrugineus, elytris flavis; capite prothoraceque crebre punctatis, hoc dorso posterius subplanato, absque area lævigata; elytris striatis, striis evidenter punctatis.
Long. $2\frac{1}{3}$ millim.

Hab. Costa Rica, Volcan de Irazu 6000 to 7000 feet (*Rogers*).

We have only one example of this species; it is apparently a female. It is remarkable inasmuch as, though the disc of the thorax is somewhat deplanate, there is no definite space free from punctures; the flattening does not extend quite to the base, so that, seen from the front, there appears to be a slight elevation of the middle of the basal part. The antennæ have the ninth joint strongly transverse, it and the tenth being darker in colour. There is much punctuation on the head. The thorax is rather narrow, the lateral margins are strongly crenulate, the sides curved, the front angles rectangular, the hind angles very obtuse, the punctures large and numerous. The coxal lines distinctly detached.

This insect is not really free from pubescence, as careful examination shows an excessively minute short hair rising from each puncture on the elytra.

10. **Europs euplectoides,** sp. n.

Minutus, depressus, nitidus, glaber, ferrugineus, elytris testaceis, limbo apiceque vage fuscescentibus; prothorace quadrato, subtiliter punctato, dorso planato, ante scutellum vage depresso, area media irregulari lævigata.
Long. $1\frac{1}{2}$ millim.

Hab. Panama, Bugaba (*Champion*).

Antennæ small, ninth joint very strongly transverse, much broader than the eighth. Head broad and short, finely punctulate. Thorax quadrate, straight at the sides; hind angles rectangular, the surface finely punctulate, with a broad but indefinite area on the disc free from sculpture; there is no definite impression at the base. Elytra very finely punctate-striate; the lateral and apical margins very slightly infuscate. Coxal lines detached, reaching nearly to the hind margin of the first ventral segment. Legs short. Three male examples.

11. **Europs pumilio,** sp. n.

Minutus, depressus, nitidus, glaber, ferrugineus, elytris testaceis; prothorace subquadrato, fortiter punctato, medio area lata impunctata; elytris subtiliter striatis, striis vix punctatis.
Long. $1\frac{7}{8}$ millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Closely allied to *E. euplectoides*, but rather longer and more depressed, and readily distinguished by the coarser thoracic sculpture. Head short, epistome convex, vertex coarsely punctate. Thorax straight at the sides, the angles but little rounded, the lateral margin very fine; rather coarsely punctate, with a smooth space on the middle, broad behind, narrower in front; this area is defined by punctures crowded so as to be almost confluent; there is no distinct depression behind. The striæ of the elytra are very fine and regular. The coxal lines are detached, but are short, and very fine behind. One specimen, a female; the pygidium is elongate.

Although we have received only the female of this species and the male of *E. euplectoides*, I do not doubt that the two are distinct.

12. **Europs nanus**, sp. n.

Minutus, depressus, nitidus, testaceus; capite parvo, subtiliter punctato; prothorace subquadrato, subtiliter punctato, medio area lata lævigata; elytris subtiliter striatis, striarum punctis haud minutis.
Long. vix $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

The smallest of the genus; much narrower than *E. euplectoides* and more depressed, the surface more shining than in any other *Europs* known to me. The head is quite small, the antennæ very short, but the ninth joint is strongly transverse. The thorax is straight-sided, the lateral margin very fine; the punctuation is fine and scanty, but surrounds a distinct, impunctate, median space, broad behind, narrower in front. The punctures of the elytra are larger than usual. The coxal lines are slightly detached, their terminal portions very fine and indistinct. One male.

13. **Europs longulus**, sp. n. (Tab. XVIII. fig. 3.)

Haud depressus, subcylindricus, ferrugineus, nitidus; capite thoraceque elongatis, illo posterius tantum subconstricto, angulis posterioribus fere nullis; prothorace sat crebre punctato, nullo modo impresso, medio area angusta, parum discreta, impunctata; elytris punctato-striatis.
Long. 3 millim.

Hab. GUATEMALA, near the city (*Champion*).

An aberrant species, with the facies of *Rhizophagus*, and distinguished by the transversely more convex form and the extremely indistinct hind angles of the head. Antennæ with the ninth joint large, the club very distinctly biannulate. Head not flattened, sparingly punctured. Thorax almost parallel-sided, transversely convex, front angles not at all prominent, but nearly rectangular, hind angles very obtuse and rounded, punctuation very distinct but not at all dense. Elytra finely striate, the striæ finely punctured. Coxal lines not at all detached; intercoxal process of abdomen narrow. Two male specimens.

14. **Europs convergens,** sp. n.

Nigricans, nitidus, antennis pedibusque rufis; thorace suboblongo, haud impresso, parce punctato; elytris striatis, striis subtiliter punctatis.
Long. $3\frac{1}{2}$ millim.

Hab. Mexico, Jacale (*Sallé*).

Head a little broader than the thorax, sparingly and finely punctured. Thorax oblong, all the angles very obtuse, the lateral margins crenulate, the surface coarsely punctate, with a smooth space along the middle: there is no basal impression. Elytra distinctly and regularly striate, the striæ very distinctly punctured. Pygidium but little elongate, coarsely punctured. The head is larger in the male, and the thorax is distinctly narrowed behind. One pair. A third specimen from the same locality is perhaps a very largely developed male of this species; it is broader, and has the thorax more finely punctured, without a smooth space along the middle.

15. **Europs luridipennis.**

Phyconomus luridipennis, Reitter, Deutsche ent. Zeitschr. xx. p. 299 (1876)[1].

Haud deplanatus, parum nitidus, pubescens, niger, elytris rufis; prothorace subtransverso, fortiter punctato, medio area angusta lævigata; elytris seriatim punctatis.
Long. 3 millim.

Hab. Mexico[1] (*coll. Oberthür*), Orizaba (*Sallé*), Mexico city (*Höge*).

Distinguished from the other species of *Europs* by the pubescent upper surface and the less regular sculpture of the elytra; the coxal lines are not at all detached. The head of the male is remarkably broad, and is short in proportion; the thorax, too, is shorter than usual. Antennæ short, ninth joint large. Thorax broader than long, all the angles obtuse, the surface rather coarsely and closely punctured, pubescent; a narrow smooth space along the middle. Elytra red, the suture only infuscate; with seriate setigerous punctures which form imperfect striæ. Pygidium moderately long. Four specimens. They agree with the types of *P. luridipennis*, Reitter, lent to me by M. René Oberthür.

16. **Europs discedens,** sp. n.

Minus depressus, angustus, subtilissime pubescens, sat nitidus, ferrugineus; prothorace fortiter æqualiter punctato; elytris profunde striato-punctatis.
Long. 2 millim.

Hab. Guatemala, Capetillo (*Champion*).

This little insect is destitute of the facies of the normal *Europs*, and has no smooth space on the thorax. The two individuals obtained are, I think, females. The antennæ are rather slender, and the ninth joint is not very broad, though different from those preceding it, and quite detached. The head is but small, and the space over

the mandibles is much smaller than usual; the hind angles are really free though inconspicuous. The thorax is scarcely so broad as long, not flattened, nearly straight at the sides, none of the angles are prominent, the hind angles are very obtuse, the lateral margin is inconspicuous; though crenulate, the punctuation is rather coarse; there is no distinct smooth space and not a trace of a basal impression. The elytra are very regularly sculptured; the setæ rising from their punctures are difficult to detect. The legs are rather slender. The coxal lines are not detached.

E. discedens in many respects comes near *Hesperobœnus*.

ANEUROPS, gen. nov.

Coxæ anteriores omnino inclusæ, sat parvæ; acetabulis externe prolongatis; trochanteres haud parvi. Prosterni suturæ discretæ.

This genus differs from *Europs* in the larger front coxæ, as well as by the head not being constricted between the eyes and the posterior angles. It has quite the facies of *Rhizophagus* and connects *Europs* with the Rhizophaginæ. It is distinguished from *Rhizophagus* by the transversely less elongate anterior acetabula, and by the absence of antennal grooves on the underside of the head.

We figure the prothoracic parts of this interesting form (Tab. XVIII. fig. 4 *a*). It is clearly connected with *Europs* by means of *E. convergens*. The number of joints in the feet is open to the same uncertainty as it is in many other of the allied forms: if the tarsi are 5-jointed, then the basal joint is so extremely short that it remains doubtful whether it is more than the articular portion of a joint. Counting it as a joint, the second and third joints are short, but rather broad; the fourth joint is small and forms, in fact, merely a part of the long terminal joint. In the male the fourth joint of the hind foot has disappeared, though there is perhaps a trace of it in the form of a dark mark on the basal portion of the fifth joint. The second and third joints are broader in the male on all the feet than they are in the female, and have a good deal of pubescence beneath.

1. **Aneurops championi,** sp. n. (Tab. XVIII. figg. 4, ♂; 4 *a*, side of prosternum, ♂.)

Sat elongatus, parum deplanatus, nigricans, nitidus, antennis pedibusque rufescentibus; capite parce punctato; prothorace suboblongo, lateribus mox ante basin angustatis, crebre irregulariter punctato, area media lævigata, haud impresso; elytris striatis, striis subtiliter punctatis.

Long. $3\frac{3}{4}$–5 millim.

Hab. Guatemala, Totonicapam 8500 to 10,500 feet, Quiché Mountains 7000 to 9000 feet (*Champion*).

Antennæ with the ninth joint large, strongly transverse. Thorax with all the angles very obtuse, lateral margin crenulate; the surface with numerous punctures, leaving a

space along the middle smooth, and with a more indistinct, smooth, lateral space on each side; there is no basal impression. Elytra regularly striate; the striæ do not reach quite to the apex, they are finely punctate, but the punctures are very narrow. The pygidium is rather coarsely punctured; each puncture on the upper surface bears a seta so minute as to be evident only on careful examination. Nine specimens.

The male is larger and broader than the female, and has the head unusually large. The supplementary segment is large and distinct. The basal ventral segment is hairy along the middle. The female has quite the appearance of a species of *Rhizophagus*.

BACTRIDIUM.

Bactridium, Leconte, Classif. Col. N. Amer. ed. 1, p. 86 (1861) [1].

Leconte [1] established the genus *Bactridium* in a very unsatisfactory manner for two species, without naming one as the type. I think we may take the first he mentioned as the type of the genus. If we adopt this view, certain of our species appear to belong really to it, being congeneric with *B. ephippigerum*, the species in question. They are distinguished by the short broad form, by the broad intercoxal process of the abdomen, which is straightly truncate in front, and by the extremely short intermediate abdominal segments, each of which bears a series of closely-placed deep punctures. These characters are exhibited in our *B. divisum*, as well as in *B. ephippigerum*. All the other species will probably have to be eventually removed from the genus. *Crine*, Pascoe, is at present correctly referred to *Bactridium*, but will probably also be separated. *Mimemodes*, Reitt., also, cannot be at present distinguished from *Bactridium*.

1. **Bactridium divisum**, sp. n.

Breve, depressum, nitidum, piceum; antennis, pedibus elytrisque rufis, his apice fuscescente; capite prothoraceque nigricantibus, hoc transverso, subtiliter punctato, area lata ante basin lævigata; elytris striis internis obsoletis.

Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

Club of the short antennæ very large. Head very short, eyes placed close to the thorax, no free angles behind them; surface finely punctate. Thorax transverse, the angles not obtuse, very sharply marked, the sides a little narrowed in front, so that a very obscure angle is formed in front of the middle; very shining, rather finely and not closely punctate, with a broad, very well-marked smooth area, a little depressed behind, in front of the base. Elytra with a very fine sutural stria, the next two striæ obsolete, two others outside this distinct and finely punctured; a sixth series of punctures exists just outside the shoulder. The pygidium is coarsely punctate. Seven specimens; one of them is of a pallid red colour.

2. **Bactridium adustum.**

Rhizophagus adustus, Reitter, Verh. Ver. Brünn, xi. p. 39 (1872) [1].
Bactridium adustum, Reitter, Deutsche ent. Zeitschr. xx. p. 299 (1876) [2].
Bactridium sp., Champ. Trans. Ent. Soc. Lond. 1898, p. 410 [3].

Hab. NORTH AMERICA ? [1]—MEXICO, Teapa [2] (*coll. Oberthür*); BRITISH HONDURAS (*Blancaneaux*); GUATEMALA, Chiacam and Chacoj in Vera Paz, Guatemala city, Zapote, El Reposo, Cerro Zunil (*Champion*).—ANTILLES, Grenada and St. Vincent [3].

This insect, though widely distributed, seems to be rare, and we have only one, two, or three individuals from each locality. If I am right in treating all of them as one species, it is a variable form. It has the peculiarity that in the male sex the first ventral segment has a setigerous puncture on each side just within the coxal line. These punctures are, however, apparently absent in the case of a large male from Zapote, which I was inclined at first to separate as a distinct species under the name of *B. staphylinum*. Small, narrow, pallid examples, with a faint thoracic depression, also appear to differ considerably. Two of these found at El Reposo may possibly be distinct. A large unicolorous specimen found at Cerro Zunil scarcely differs from the type of *B. angulicolle*, Reitter (from Cuba), except that it lacks the slight angulation of the side of the thorax described by the name of the Cuban form. A specimen from Colombia, also kindly sent by M. Oberthür, has a stronger punctuation on the thorax. I think it impossible at present to decide whether there is really more than one species amongst this material.

3. **Bactridium brevicorne,** sp. n.

Breve, haud depressum, nitidum, rufum, elytris flavis; prothorace transversim subquadrato, dorso subdeplanato, ante basin parum perspicue depresso; elytris subtiliter seriatim punctatis.
Long. $1\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Antennæ extremely short. Head with minute free angles behind the eyes; finely punctate. Thorax not so long as broad, the angles not rounded, the disc moderately coarsely punctate, without distinct smooth space, but a little flattened, and, when seen from in front, the punctures at the base form an obscure series, curved and scarcely visibly depressed. Elytra with regular series of fine punctures. Under surface with very little sculpture. Coxal lines very short. Three specimens.

4. **Bactridium crassum,** sp. n.

Convexum, nitidum, rufum, thorace nigro vel piceo, basin versus angustato, haud impresso; elytris subtiliter seriatim punctatis.
Long. $2–2\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ with very large club. Head finely punctate, eyes well separated from the

thorax, an extremely minute free angle behind them. Thorax about as long as broad, distinctly narrowed behind, rather finely punctate, a few punctures absent in front of the base, where there is no trace of a depression. Elytra with five series of fine punctures, obsolete towards the tip. Coxal lines not detached. Two specimens.

5. **Bactridium angustum**, sp. n.

Angustum, parallelum, deplanatum, piceo-rufum, elytris pallide testaceis ; antennis pedibusque rufis ; prothorace subtiliter punctato, ante basin transversim impresso ; elytris subobsolete, parce seriatim punctatis.
Long. 2 millim.

Hab. GUATEMALA, Senahu in Vera Paz, Guatemala city (*Champion*).

Distinguished from the other species of the genus by its very narrow form, and by the diminished punctuation of the elytra. Head without a free angle behind the eyes, finely punctured. Thorax rather longer than broad, straight-sided, the hind angles rectangular, not prominent; the surface very finely punctured, transversely impressed in front of the base, but with only a very obscure smooth space before this. Elytra elongate, pallid, with series of very fine punctures which become obsolete behind. The male has a larger head than the female; the supplementary segment is very obscure. Three specimens.

6. **Bactridium flohri**, sp. n.

Subelongatum, vix depressum, ferrugineum, nitidum ; prothorace subquadrato, ante basin impresso, subtiliter punctato ; elytris subtiliter striatis, striis externis obsoletis.
Long. $2\frac{1}{8}$ millim.

Hab. MEXICO, Motzorongo in Vera Cruz (*Flohr*).

This little insect connects to a considerable extent the aberrant *B. eumorphum* and *B. germanum* with the more ordinary forms of the genus. The ninth joint of the antenna is not at all enlarged, the club-joint is large. The head is rather large, finely punctate, and there are no free angles behind the eyes. The thorax is about as long as broad, straight at the sides, the hind angles rectangular, the lateral margin extremely fine; the surface rather finely punctate, with a small impression in the middle in front of the base, with only a very small indefinite smooth area before it. Striation of elytra unusually fine. Coxal lines detached and reaching to the hind margin of the first segment. One male. There is no abdominal fovea.

Named in honour of the late Julius Flohr, whose decease has proved a serious loss to the progress of Coleopterology in Mexico.

7. **Bactridium rude**, sp. n. (Tab. XVIII. fig. 5.)

Robustum, haud depressum, piceum, pedibus antennarumque basi rufescentibus, subopacum ; prothorace fortiter punctato, ante basin impresso, dorso area impunctata ; elytris crenato-striatis ; antennis pedibusque crassis.
Long. $2\frac{1}{2}$–$3\frac{1}{8}$ millim.

Hab. GUATEMALA, Cubilguitz (*Champion*); PANAMA, David (*Champion*).

This peculiar insect is readily distinguished from our other species by the great development of the head and mandibles. It has a character peculiar to itself, inasmuch as the coxal lines are not only detached and distinct, but are connected together behind, so that they enclose a shield-shaped space. The colour is somewhat variable, the elytra being more or less indistinctly striped with red. The antennæ are remarkably thick, the ninth joint not at all detached from those preceding it. Head thick, the genal prominences in the male greatly developed, the mandibles so shaped beneath as to form a protecting cavity for the mouth-parts; the hind angles of the head free; the surface rather numerously punctate, a few of the punctures on the middle confluent, so as to form two very short obscure lines. Thorax quadrate, transversely convex, rather coarsely punctate, with a transverse impression behind; before this there is a short smooth space, in front of which the surface is very slightly depressed and more numerously pnnctured. The elytra are alutaceous and regularly crenate-striate.

Eight examples. The one from Panama has the surface more shining.

8. **Bactridium eumorphum,** sp. n. (Tab. XVIII. fig. 6.)

Sat elongatum, haud depressum, ferrugineum, nitidum; prothorace sat crebre irregulariter punctato, absque area lævigata discreta; elytris sat elongatis, subtiliter punctato-striatis.

Long $2\frac{1}{2}$–3 millim.

Hab. GUATEMALA, Capetillo, Zapote, Cerro Zunil, Panajachel (*Champion*).

This and the two following are readily distinguished from most of our other species by their more Rhizophagoid form and sculpture. Antennæ short, penultimate joint not larger than the others. Head rather sparingly and finely punctured; there exist small free angles, but only obscurely. Thorax nearly straight-sided, transversely convex, shining, rather finely and not densely punctured; a few of the punctures on each side of the middle behind are arranged so as to form an obscure line, converging towards its fellow at the base, and on the area between these obscure lines the punctures are more sparing. The elytra are elongate, a little paler in colour than the head and thorax; their sculpture consists of fine striæ, in which punctures can be distinguished. The male is rather broader and more deplanate than the female, and has a larger head; the terminal ventral segment has a rather broad impression extending the whole length. Thirteen specimens.

9. **Bactridium germanum,** sp. n.

Sat elongatum, angustum, haud depressum, ferrugineum, nitidum; prothorace elongato, sat crebre punctato, medio area angusta lævigata; elytris sat elongatis, striatis, striis subtiliter punctatis.

Long. $2\frac{1}{4}$–$2\frac{1}{2}$ millim.

Hab. GUATEMALA, Mirandilla (*Champion*).

Closely allied to *B. eumorphum*; a little narrower and less depressed, with the

median impunctate space on the thorax more definite, the punctures of the striæ of the elytra very minute, the pygidium of the male rather stouter, and the fovea of the last ventral segment obscure. One pair.

Subfam. *TISIPHONINÆ.*

The position of this subfamily is doubtful, a very careful analysis being requisite before we can decide whether the single genus referred to it, *Tisiphone*, Reitter, should be placed in Monotomidæ, Nitidulidæ, or Cucujidæ. It consists at present of a few rare and minute insects found in the Southern States of North America, the Antilles, and Northern South America. I have at present before me eight species, viz.: the three here described from Mexico and Central America; the two species upon which the genus *Tisiphone* was founded, viz. *T. hypocoproides* and *T. nitiduloides*, from the Antilles; *T. exilis*, Grouvelle (Murray ??), from Grenada; a species from Jamaica allied to *T. nitiduloides*, in my own collection; and the N.-American *T. palmicola*, Lec.

TISIPHONE.

Tisiphone, Reitter, Deutsche ent. Zeitschr. xx. p. 296 (1876).

Smicrips, Leconte, Proc. Amer. Phil. Soc. 1878, p. 399; Horn, Trans. Amer. Ent. Soc. vii. p. 326 (1879).

1. **Tisiphone chontalenus**, sp. n. (Tab. XVIII. fig. 7.)

Depressus, opacus, rufus, elytris obscurioribus, vage fusco-limbatis; antennis pedibusque testaceis; supra subtilissime, ubique æqualiter punctatus.

Long. $1\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Var.? Pygidio valde elongato.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ rather slender. Head somewhat small; eyes large, separated by but a little distance from the points of insertion of the antennæ. Thorax transverse, slightly rounded at the sides; hind angles nearly rectangular; surface densely and finely punctured, without smooth space along the middle. Elytra and pygidium punctured like the thorax; the pygidium elongate.

This species is distinguished from the North-American *Smicrips palmicola* by its more elongate and depressed form, by the larger but less convex eyes, from which the antennæ are less remote, and by the horizontal and much longer pygidium. The three examples from Chontales agree, except in a slight difference in colour. The single specimen from Guatemala, in addition to its very elongate pygidium, has the punctuation of the thorax slightly stronger.

2. **Tisiphone mexicanus,** sp. n.

Depressus, opacus, testaceus, supra subtilissime punctatus ; thorace medio linea angusta, impunctata.
Long. 1¼ millim.

Hab. MEXICO, Omilteme in Guerrero 8000 feet (*H. H. Smith*).

Closely allied to *T. chontalenus*, and distinguished by the smaller size, still more depressed form, smaller eyes, and the indistinct impunctate line along the middle of the thorax. One specimen.

3. **Tisiphone distans,** sp. n.

Sat convexus, subtiliter punctatus, ferrugineo-testaceus ; prothorace antrorsum angustato, elytris angustiore.
Long. 1⅓ millim.

Hab. GUATEMALA, Carrizal in Vera Paz (*Champion*).

This species is readily distinguished from all the others of the genus by the more convex elytra and the narrower thorax. The head is small, with small and very convex eyes. The thorax is distinctly narrower than the elytra, a good deal narrowed in front, the hind angles very obtuse, the punctuation extremely fine, without trace of an impunctate area along the middle. The punctuation of the elytra is extremely fine, not dense. The pygidium is much deflexed. One specimen.

This insect will probably form a distinct genus, as the more contracted thorax is accompanied by a greater approximation of the front coxæ and a slightly different structure of their acetabula. It more nearly resembles the North-American *T. palmicola* than any other species I have seen.

Fam. CRYPTOPHAGIDÆ *.

In this work we have adopted the system of arrangement made use of in the Munich Catalogue of Coleoptera, so far as the sequence of families is concerned. As considerable changes have taken place in the views of taxonomists since that Catalogue was published, it is necessary to make a few remarks on certain points connected with Cryptophagidæ. In the important work in course of publication by Dr. Ganglbauer ('Die Käfer Mitteleuropa'), the family Cryptophagidæ is regarded as merely a division of Erotylidæ. This course has long since been advocated by me, but it cannot here be adopted, as the Erotylidæ have already been treated fully in our Vol. VII. of the Coleoptera. The system I here adopt is not, therefore, to be considered as expressing my own views. In the Munich Catalogue the Biphyllinæ are placed as a subdivision of Mycetophagidæ, but this is certainly erroneous, and renders it impossible to define the Mycetophagidæ. I therefore place the group in question in the family under consideration at present, a course which has already been adopted by Dr. Ganglbauer.

* By D. SHARP.

The family, as thus limited, includes a considerable number of insects, the exotic forms of which have hitherto been very little studied or collected, so that it is scarcely a matter for surprise that nearly the whole of the 103 species here dealt with are new. A few have been previously described by Reitter, and I regret that I have not been able to obtain his types for comparison, so that my identification of his species is possibly not in all cases correct.

As regards the groups, I here treat the following as subfamilies, viz.: Telmatophilinæ, Cryptophaginæ, Atomariinæ, Biphyllinæ *. I may remark that in this case I adopt the same course as is pursued by Dr. Ganglbauer, although in our fauna it is very difficult to draw a satisfactory line of division between Telmatophilinæ and Cryptophaginæ. On the other hand, the Biphyllinæ appear to be truly distinct, no form having been brought to light that tends to connect them with any other division. They might be treated as a separate family with very good reason.

Subfam. *TELMATOPHILINÆ.*

In all the insects I place in this subfamily, the tarsi have the third joint, if not also the second and first, produced at the tip, so as to project under the following joint, a structure that cannot be well seen unless the terminal tarsal joint is bent away from the rest of the foot. This structure must not be confounded with the lobe of the third joint that exists in the subfamily Biphyllinæ, where the lobe is a delicate appendage, not a part of the body of the joint.

Dr. Ganglbauer, in his classification of the Cryptophagidæ, attaches great importance to the condition of the anterior acetabula, *i. e.* whether open or closed. I am at present compelled to treat this character as of subordinate importance, and I accordingly place in the Telmatophilinæ one genus, *Cœlocryptus*, having the acetabula broadly closed behind.

TELMATOPHILUS.

Telmatophilus, Heer, Faun. Helv. i. p. 417 (1841).

This genus includes a small number of species from the Palæarctic and Nearctic regions, in addition to the one said to occur in Mexico.

1. Telmatophilus ferrugineus.

Telmatophilus ferrugineus, Reitter, Deutsche ent. Zeitschr. xix. p. 227 (1875) [1].

Hab. Mexico [1].

I can give no information about this insect.

* The name *Biphyllus* is now frequently replaced by *Diphyllus*. An emendation that makes a new name is, however, scarcely permissible.

TELMATOSCIUS, gen. nov.

Tarsi breves, minus graciles, 5-articulati, articulo 4° minuto, 3° breviter lobato; abdomen segmento 1° ventrali parum elongato, post coxas segmento 2° haud longiore.

This genus may be placed next to *Loberus*, from which it is distinguished by the form of the thorax, narrowed in front and destitute of a distinct transverse impression before the scutellum, and by the shorter, more compact tarsi. The club of the antennæ is 3-jointed, but the ninth joint is considerably smaller than the tenth. The thorax is very closely applied to the elytra; the prosternal process is short and bent up. The meso-metasternal suture has a raised margin between the coxæ, which are but little separated. The first joint of the hind foot is quite short, the second is very short, and obliquely truncate but not lobed, the third joint is rather larger and forms a short lobe beneath the minute fourth joint, the fifth joint is short and rather thick.

1. **Telmatoscius claviger,** sp. n. (Tab. XVIII. fig. 8.)

Oblongo-ovalis, nigricans, pedibus fusco-testaceis; antennis testaceis, clava nigricante; prothorace obsolete punctato, subopaco; elytris subtiliter subseriatim punctatis et pubescentibus.

Long. $2\frac{7}{8}$ millim.

Hab. Mexico, Orizaba (*H. H. Smith*); Guatemala, San Gerónimo, Capetillo, Dueñas, Guatemala city (*Champion*).

Antennæ with joints 4–8 small, differing little from one another, ninth strongly transverse, tenth much broader than ninth, terminal joint as broad as the tenth and a little longer. Thorax strongly transverse, distinctly narrowed in front, hind angles rectangular, lateral margin rather broad, but not much raised, continued for a short distance along the anterior margin; basal margin fine; surface not finely but obsoletely punctured, a small impression close to the base on each side, the transverse depression between them very indistinct, so that the lobed and slightly elevated middle part of the base is only very indefinitely marked off. Elytra numerously and finely punctured, the punctures distinctly seriate, though the series are far from being conspicuous; sides impressed near the lateral margin, which is very distinct. Seven specimens.

LOBERUS.

Loberus, Leconte, Classif. Col. N. Amer. ed. 1, p. 98 (1861).

This genus is probably peculiar to the New World, where it will no doubt prove to be rich in species, though but few have hitherto been described; one of them is North American.

The various species are excessively difficult to discriminate: attention must be given to the punctuation of the elytra, which is either diffuse or serial, with many intermediate conditions; usually the elytra bear two kinds of pubescence, or setæ, one of which is

slightly longer than the other and has a serial arrangement; the extent to which this longer setosity predominates is also of importance. When the punctuation is perfectly serial, the setæ may be either well developed or nearly absent. The slight differences that exist in the coloration of the joints of the club of the antennæ appear to be fairly constant, and are therefore of considerable assistance.

In the following descriptions the species with the least serial arrangement of punctuation and pubescence are placed first.

1. **Loberus chiriquensis,** sp. n.

Rufus, antennarum articulis 9° et 10° nigris; elytris vage subinfuscatis, humeris apiceque pallidioribus, subtiliter æqualiterque pubescentibus et punctatis.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Terminal joint of antenna much paler than the preceding two joints. Thorax red, small, finely punctate, sides evenly rounded, front a little narrower than the base. Elytra elongate, yellow-red, but vaguely and largely infuscate, so as to leave the shoulders and a broad space at the tip feebly distinguished in colour from the rest of the surface; with very fine punctuation and pubescence, the latter subseriately arranged, so that about nine rows of fine setæ exist between the suture and the shoulder of each wing-case. Punctuation of metasternum coarse and definite. Seventeen specimens.

This species varies much in the amount of infuscation of the upper surface.

2. **Loberus guatemalenus,** sp. n.

Rufus, subtilius punctatus et pubescens; in elytris sculptura et pubescentia serierum et interstitiarum vix distinctis. Variat corpore elytrisque plus minus infuscatis.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*); GUATEMALA, Senahu in Vera Paz, Guatemala city, Aceituno, Capetillo, Dueñas, Zapote, Cerro Zunil (*Champion*).

Closely allied to *L. chiriquensis*, but rather smaller, with a unicolorous club to the antennæ and the thorax a little more contracted behind. In the specimens most deeply suffused with dusky colour there is a distinct rufescent humeral angle, but this is rarely very definite. Near the suture the sculpture and pubescence of the interstices are distinctly more distant than those of the series, whereas in *L. chiriquensis* scarcely any difference can be detected between the two. The sculpture of the metasternum is not quite so coarse as it is in *L. chiriquensis*. About thirty specimens.

3. **Loberus sellatus,** sp. n.

Rufus, prothorace disco antennarumque articulis 9° et 10° nigricantibus; elytris nigris, humeris apiceque late flavis, crebrius subtiliter haud seriatim pubescentibus.

Long. $2\frac{1}{4}$ millim.

Hab. MEXICO, Teapa (*H. H. Smith*), Tapachula (*Höge*); BRITISH HONDURAS, Belize, Rio Hondo (*Blancaneaux*); GUATEMALA, Cahabon, San Juan, Senahu, Teleman, and Tamahu in Vera Paz (*Champion*).

Readily distinguished from *L. guatemalenus* by the colour, a broad space (quite one-third of the length) at the tip and a large humeral mark being clear yellow. The punctuation and pubescence are much like those of *L. guatemalenus*. From *L. humeralis*, var. *lætus*, which is nearest in colour, *L. sellatus* may be readily distinguished by the sculpture and pubescence of the elytra, the serial arrangement of both being but indistinct. About twenty specimens.

4. **Loberus cryptophagus,** sp. n.

Suboblongus, ferrugineus; elytris subopacis, crebrius subtiliter punctatis et pubescentibus, pubescentia haud seriata, singulo in medio vix perspicue infuscato.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

This insect can only be mistaken for a pallid variety of *L. sellatus*. Besides the colour-distinctions, it is a little larger and broader; the pubescence and punctuation are even less serial, so that though we have received only one specimen, I think it is likely to prove a distinct species.

5. **Loberus pallidus,** sp. n.

Rufus, elytris pallidis, antennis clava obscuriore; elytris subtiliter seriatim punctatis et pubescentibus, pubescentia brevi.

Long. $2\frac{1}{8}$–$2\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*), Motzorongo (*Flohr*); GUATEMALA, San Gerónimo, Chiacam and San Juan in Vera Paz, Guatemala city, Aceituno (*Champion*).

Smaller than *L. chiriquensis*, and distinguished by the very pallid elytra. Antennæ with the club-joints darker in colour than the others. Thorax narrower in front than at the base, scarcely at all constricted at the sides behind; very finely punctate. Elytra with fine, definite punctuation and pubescence, the depressed pubescence short, so that the erect setæ are unusually conspicuous. There is no difference between the serial and interstitial punctuation near the suture. Eighteen specimens.

6. **Loberus suturalis,** sp. n.

Suboblongus, testaceus, elytrorum sutura anguste nigricante, antennis articulis 9° et 10° nigris; elytris subtiliter punctatis et pubescentibus, punctatura sat conspicue seriata.

Long. 2 millim.

Hab. MEXICO, Teapa (*H. H. Smith, Höge*), Motzorongo (*Flohr*); GUATEMALA, La Tinta, Chiacam (*Champion*); BRITISH HONDURAS, Belize (*Blancaneaux*); NICARAGUA, Chontales (*Janson*).

Although very close to *L. pallidus* the large series we have received of this little *Loberus* seems to show that it is distinct; the suture is always very narrowly blackish, and the punctuation of the elytra is rather more distinctly serial. The elytra are shorter, less oval, and the antennæ and legs are a little shorter; the whole insect is rather smaller. About forty specimens.

7. **Loberus brevicollis,** sp. n. (Tab. XVIII. fig. 9.)

Angustus, parallelus, rufo-testaceus, elytris disco subinfuscato, antennarum clava fuscescente; prothorace valde transverso; elytris subtiliter pubescentibus, seriatim punctatis.

Long. $1\frac{7}{8}$ millim.

Hab. Panama, David (*Champion*).

This is the smallest *Loberus* known to me; it is of narrow, parallel form, and remarkable by the broad and very short thorax. The only specimen obtained has a tuft of yellow pubescence on each side of the middle of segments 2–4 of the abdomen: I do not know whether this is a sexual or a specific character; it occurs in other species, but all are extremely rare. *L. brevicollis* can only be confounded with *L. suturalis* or *L. longulus*; from the former even a superficial inspection of the differences of form and colour readily distinguishes it; *L. longulus* is unicolorous and more elongate, and is quite destitute of the abdominal tufts of pubescence.

8. **Loberus longulus,** sp. n.

Angustus, parallelus, ferrugineus, nitidus; prothorace valde transverso; elytris subtiliter pubescentibus, seriatim punctatis.

Long. $2\frac{1}{4}$ millim.

Hab. Panama, Tolé (*Champion*).

Readily distinguished from *L. suturalis* by the elongate, narrow, parallel form, and the very short thorax, as well as by the slight distinctions in colour. The serial punctuation of the elytra is very distinct, but the seriate arrangement of the pubescence is much less conspicuous owing to its being very short.

9. **Loberus lateralis,** sp. n.

Rufus, antennis articulis 9° et 10° nigricantibus; elytris dorso vage fuscescentibus, humeris apiceque rufescentibus, subtiliter, parum seriatim pubescentibus, ad latera anterius magis profunde impressis.

Long. 2 millim.

Hab. Guatemala, San Juan in Vera Paz (*Champion*).

In this species there is a little tuft of pallid pubescence on each side of the middle of ventral segments 2–4. This is perhaps a sexual peculiarity, but it is sufficient to distinguish *L. lateralis* from *L. sellatus*, in which this character does not occur at all. The comparatively broad oval form and the pubescence and punctuation of the elytra

being only indistinctly seriate, separate *L. lateralis* from *L. brevicollis*. The epipleuræ are a little broader than in most of the other species of the genus, and the lateral impression behind the shoulders is slightly more marked. One specimen.

10. **Loberus marginalis,** sp. n.

Rufus, antennis articulis 9° et 10° nigricantibus; elytris subtiliter parum seriatim pubescentibus, ad latera anterius magis profunde impressis.

Long. $2\frac{1}{3}$ millim.

Hab. Guatemala, San Juan in Vera Paz (*Champion*).

This species also has tufts of pubescence on the ventral segments, but they are smaller than in *L. lateralis*. The difference in colour of the elytra of the two is of but little importance, but *L. marginalis* is rather larger and broader than *L. lateralis*, and the explanation of the margin of the elytra below the lateral impression is greater. This character distinguishes *L. marginalis* from most of the species similar to it at first sight. One specimen.

11. **Loberus humeralis.**

Loberus humeralis, Reitter, Col. Hefte, xiii. p. 75 (1875) [1].

Hab. Mexico [1], Motzorongo in Vera Cruz (*Flohr*).

Var. *lætus*, var. n. Elytris ad apicem haud infuscatis.

Hab. Mexico, Motzorongo in Vera Cruz (*Flohr*), Teapa (*H. H. Smith*).

This species is remarkable on account of the regularity of the sculpture and pubescence; the punctures on the elytra form quite regular, definite series separated by wide interstices; the punctures are setigerous, so that the hairs also form regular series, there being scarcely any punctures or pubescence on the interstices. The colour of the elytra is deeply infuscate, the shoulders remaining conspicuously ferruginous, and the apex being vaguely more or less paler. Thirty specimens.

We have a series of examples from Teapa and Motzorongo in which the infuscation of the elytra is much reduced, so that the apical part is broadly clear yellow, much as in *L. sellatus*: these I have called var. *lætus*. Thirteen specimens.

12. **Loberus discipennis.**

Loberus discipennis, Reitter, Col. Hefte, xiii. p. 76 (1875) [1].

Hab. Mexico, Teapa [1] (*H. H. Smith*).

In this species there is a perfectly regular serial punctuation on the elytra, as in *L. humeralis*; but the pubescence is almost entirely absent. There is a large but very vague, longitudinal infuscation on each end of the elytra. Twelve specimens have been received by us.

PLATOBERUS, gen. nov.

Coxæ omnes distantes; tarsi lati, breviusculi, subtus lobati. Prothorax latus, angulis anterioribus discretis.

The insects forming this genus are allied to *Loberus*, from which they are readily distinguished by the above-mentioned characters. The form of the prothorax is peculiar, and gives the members of the genus a distinctive facies. The lateral depression near the base of the elytra is also a good character, though it may be seen in a less striking form in certain species of *Loberus*.

I have not seen any specimens of *Platoberus* from other regions; but as our four species all come from Panama, the occurrence of the genus in South America is more than probable.

1. **Platoberus latus**, sp. n. (Tab. XVIII. fig. 10.)

Latus, subdepressus, rufescens, nitidus; antennis clava magna nigra, prothorace disco plus minusve infuscato; elytris post humeros late impressis et explanatis, seriatim subtiliter punctatis et breviter parce setosis, interstitiis setis raris, longioribus, erectis armatis.

Long. 3–3½ millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

This insect is readily distinguished by the broad lateral cavity of the elytra and by the peculiar setosity: this consists of regular series of fine curvate hairs springing from the fine punctures of the elytra, and a few longer erect hairs rising from the broad interstices. The front angles of the thorax project a little forwards. On the under surface the metasternum is furnished with distinct, elongate, free coxal lines; but on the first ventral segment there are no coxal lines, the very flat coxal margin forming merely a short, angular prolongation. I am not able to distinguish the sexes. There is not much variation in the series of about forty specimens received.

2. **Platoberus rotundus**, sp. n.

Latus, rufo-testaceus, nitidus; elytris post humeros impressis, seriatim subtiliter punctatis, setosis, interstitiis setis longioribus haud conspicuis.

Long. 2⅞ millim.

Hab. Panama, Bugaba (*Champion*).

Readily distinguished from *P. latus* by the short rotund elytra, the serial punctures on which are more closely placed and the pubescence longer. The distortion of the sides of the elytra is less, the prothorax is straight in front, and the front angles project a little laterally; the head and thorax are also narrower than in *P. latus*. The coxal margins of the first ventral segment are not angulate. Two specimens.

3. **Platoberus robustus,** sp. n.

Latus, rufescens, antennis ante apicem nigricantibus; elytris post humeros impressis, seriatim minus subtiliter punctatis, crebrius minus subtiliter setosis.
Long. $2\frac{1}{2}$ millim.

Hab. Panama, David (*Champion*).

This insect is very closely allied to *P. rotundatus*, but I think it will prove to be a different species, though there are only two examples to judge from. The punctuation of the elytra is more crowded and less fine; the elytra are considerably narrower, and I detect no longer setæ amongst their pubescence. The metasternal coxal lines are very inconspicuous. Two specimens.

4. **Platoberus divisus,** sp. n.

Minus, latus, rufescens, antennarum clava nigra; prothorace plus minusve infuscato; elytris versus basin nigris, apice rufo, pube minuta vestitis.
Long. $2\frac{3}{4}$–3 millim.
Var. elytris rufis.

Hab. Panama, Volcan de Chiriqui 3000 feet, Bugaba (*Champion*).

In this species the elytra have the lateral depression much less marked than in *P. latus*; the serial punctuation is fine, and that of the interstices is but little different. The front margin of the prothorax is a little sinuate. There are no abdominal coxal lines, though on very careful examination a minute rudiment of their commencement can be detected.

Eleven specimens; unfortunately most of them in a bad state of preservation. The colour is evidently variable, but in only one of the examples does it approximate to that of the other species.

TOMARUS.

Tomarus, Leconte, Classif. Col. N. Amer. ed. 1, p. 99 (1861); Reitter, Col. Hefte, xiii. p. 85 (1875).

This genus comprises a few described species, and is said to occur in the Caucasus and Japan, as well as in America. Leconte characterized it merely by some rather indefinite remarks. I have not seen the North-American species for which the genus was established, but the insects I here assign to it agree with the characters given by Reitter.

1. **Tomarus niger,** sp. n.

Niger, nitidus, convexiusculus, parce punctatus; prothorace fortiter transverso, basin versus haud angustato, lateribus subrectis.
Long. fere 2 millim.

Hab. Panama, Volcan de Chiriqui 8000 feet (*Champion*).

A very distinct species: besides differing in form from any other *Tomarus*, the black colour, not at all variegate, is peculiar to it. Antennæ slender, black, club not very long, the fifth joint unusually long, slightly longer than the third. Thorax a good deal narrower than the elytra, strongly transverse, nearly twice as broad as long, as broad at the base as in front, sides nearly straight, slightly curved, surface unimpressed, basal fovea obscure. Elytra shining black, not very convex, broad, much narrowed behind, finely and sparingly punctured. One specimen. There is very little pubescence indeed on it, but it may be rubbed.

2. **Tomarus debilis,** sp. n. (Tab. XVIII. fig. 11.)

Ovalis, ferrugineus, antennis, pedibus elytrisque testaceis, his utrinque fusco-maculatis; antennis articulis 9° et 10° nigris, articulo ultimo ferrugineo; pube suberecta minus dense vestitus; prothorace fortiter transverso, elytris parum angustiore, his circa medium sat crebre punctatis.

Long. $1\frac{3}{5}$ millim.

Hab. Mexico, Motzorongo in Vera Cruz (*Flohr*); Guatemala, Senahu and San Juan in Vera Paz (*Champion*).

Very like an *Atomaria* in size and form. Eyes moderately large. Thorax strongly transverse, a little narrowed in front, but scarcely at all behind, with numerous fine punctures, and on each side a definite small fovea contiguous with the basal margin. Elytra with a large dark mark on the side of each, in front of the middle, not reaching the suture, with slight indications of a smaller spot before the apex; the apical portion is almost impunctate, and the punctuation is also very indistinct at the shoulders. The mesosternal margins between and in front of the middle coxæ are sharply elevated. Fifteen specimens.

3. **Tomarus pubescens,** sp. n.

Ovalis, ferrugineus, antennis, pedibus elytrisque testaceis, his post basin fascia lata fuscescente; antennis articulis 9° et 10° nigris, articulo ultimo ferrugineo; pubescens; prothorace fortiter transverso, elytris paulo angustiore, his obsolete punctatis.

Long. $1\frac{3}{5}$ millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Very similar to *T. debilis*, but the dark marks of the elytra form a broad band behind the base; the punctuation of the elytra is very obsolete. The latter character, combined with a slightly narrower form, and rather longer legs and antennæ, point to the distinctness of the species. Eleven specimens.

4. **Tomarus lateralis,** sp. n.

Testaceus, elytris fusco-variegatis, antennis nigris, basi fusca, thorace fuscescente; tenuiter pubescens, parce subtiliter punctatus sat nitidus; prothorace parvo, elytris multo angustiore.

Long. $1\frac{1}{2}$ millim.

Hab. Mexico, Motzorongo (*Flohr*), Teapa (*Sallé*).

Antennæ small; club rather short, black. Head small, not much more than half as broad as the elytra. Thorax much narrower than the elytra, slightly curved at the sides and a little narrowed behind, finely but very distinctly punctured; basal impressions small and transverse. Elytra rather narrow, testaceous, each with a large, blackish, lateral spot not quite reaching the suture, also more or less distinctly infuscate about the scutellum and on the declivous portion about the suture; the basal portion sparingly punctate. Front of metasternal process deeply bi-impressed, and with two lateral foveæ on each side, close to the coxal margin.

Though resembling *T. debilis* in the elytral pattern, this species is readily distinguished by the different colour of the antennæ and the narrower thorax. Six specimens.

5. **Tomarus pictipennis,** sp. n.

Testaceus, elytris fuscis, testaceo-pictis, antennis nigricantibus, basi dilutiore, thorace fusco-rufo; tenuiter pubescens, parce punctatus, sat nitidus; prothorace parvo, fortiter transverso.
Long. $1\frac{1}{2}$ millim.

Hab. MEXICO, Motzorongo (*Flohr*), Teapa (*H. H. Smith, Sallé*); NICARAGUA, Chontales (*Janson*).

In this species the dark marks of the elytra have a much greater extension than in *T. lateralis*; they meet at the suture, leave a pale large humeral mark, and also a flammulate band behind the middle and the apex itself pale. The thorax is a little broader than in *T. lateralis*, but otherwise the two are almost identical. Eight specimens. I refer to this species a smaller example (from Teapa) with the thorax and basal parts of the antennæ clear red.

6. **Tomarus atomarius,** sp. n.

Ovalis, testaceus, nitidus, haud pubescens, fere impunctatus; elytris utrinque macula fusca.
Long. $1\frac{2}{5}$ millim.

Hab. GUATEMALA, San Gerónimo, Guatemala city (*Champion*); NICARAGUA, Chontales (*Janson*).

One of the smallest species of the genus, very like an *Atomaria* in form, readily distinguished by the shining almost impunctate surface. Thorax strongly transverse, a little narrower than the elytra, slightly narrowed behind, punctuation fine and indistinct, basal foveæ very definite. Elytra polished and shining, with a vague dark mark placed on each so as to form an interrupted band almost across the middle. Club of antenna much shorter than in the allied species, concolorous. Three specimens.

A specimen from Teapa (*Sallé*) may perhaps belong to an allied species, as it is slightly larger and has the thorax a little broader.

7. **Tomarus cruciatus.**

Tomarus cruciatus, Reitter, Col. Hefte, xiii. p. 86 (1875) [1].

Hab. Mexico [1].

I judge this to be a species allied to *T. lateralis* and *T. pictipennis*, but this is far from certain.

8. **Tomarus picticornis,** sp. n.

Fulvo-ferrugineus, pubescens; elytris macula humerali, pedibus antennisque testaceis, his articulis ante clavam nigris; prothorace fortiter transverso, basin versus angustato.

Long. fere 2 millim.

Hab. Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Antennæ rather stout, hairy, yellow, the three joints before the club black. Thorax much narrower than the elytra, twice as broad as long, narrowed behind, and a little rounded at the sides; front angles touching the rather small eyes; surface finely and rather closely punctured; basal impressions minute, punctiform, definite. Elytra scantily and very finely punctured, hairy, of a uniform brown colour, with a small yellow humeral spot. Metasternal process not impressed.

Four specimens have been found of this very distinct species.

9. **Tomarus discoideus,** sp. n.

Convexus, testaceus, antennis articulis 7°–10ᵐ nigris, elytris nigro-variegatis, prothorace macula media vel majore vel minore nigra; prothorace transverso, basin versus angustato; elytris sat crebre minus obsolete punctatis.

Long. vix 2 millim.

Hab. Mexico, Motzorongo in Vera Cruz (*Flohr*); Guatemala, Senahu and San Juan in Vera Paz (*Champion*).

Antennæ with the two joints before the club and the first two joints of the club black, terminal joint yellow. Head small, much narrower than the thorax. Thorax small, much narrower than the elytra, a good deal narrower behind, reddish, with a black mark on the middle, lateral margin more or less black; shining, rather sparingly punctured; basal impressions definite. Elytra shining, sparingly pubescent, yellow, with a dark mark at the side becoming obliterated at the suture, and with a smaller dark mark before the apex; punctuation distinct, rather coarse. Six specimens.

This insect differs from *T. lateralis* in the rather larger size, the colour of the antennæ and thorax, and the rather less transverse form of the thorax.

10. **Tomarus confertus,** sp. n.

Testaceus, antennis articulis 9° et 10° fuscis, elytris nigro-variegatis, prothorace macula discoidali nigra; subtiliter pubescens, crebrius subtiliter punctatus; prothorace transverso, elytris multo angustiore.

Long. 2 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

This is the largest of the group of species with six sternal foveæ. It is very similar to *T. discoideus*, but is readily distinguished by the denser and finer punctuation and the differently coloured antennæ. The three specimens obtained are in an extremely fragile condition.

11. **Tomarus latipennis,** sp. n.

Latus, testaceus, elytris fusco-quadrimaculatis; subtiliter punctatus; prothorace fortiter transverso, elytris angustiore, basin versus parum angustato.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ short, clear yellow. Head extremely finely punctured. Thorax much narrower than the elytra, about twice as broad as long, a little rounded at the sides and only slightly narrowed behind; finely and evenly punctured; basal impressions definite. Elytra very broad, very finely punctured and pubescent, a black spot on the middle of each and a second smaller one behind it. The six metasternal foveæ very definite. One specimen.

Distinguished by numerous points from *T. confertus* and not at all likely to be confounded with any other species of the genus.

12. **Tomarus abjectus,** sp. n.

Testaceus, fere impunctatus, brevissime pubescens; capite, thorace antennisque ante apicem nigris; elytris fascia lata pone basin fusca.
Long. 2 millim.

Hab. PANAMA, Bugaba (*Champion*).

We have received a series of about twenty examples of this species, but they are in such a bad state of preservation that I have had great difficulty in ascertaining the characters. The antennæ are moderately long; the club is elongate and slender, the last two joints yellow, the three or four preceding joints black. The thorax is strongly transverse, black, with the base paler; it is distinctly narrowed behind, but the sides are not curved; there is no punctuation, and only a very fine pubescence on it. The elytra are narrower in proportion to their length than they are in any of the allied species and there is no trace of a sutural stria; they are pale yellow, with a broad but indefinite dark band behind the base, extending forwards about the scutellum so as to leave the shoulders broadly pale; the shoulders are a little prominent: there is very little punctuation except some rather indefinite punctures on the dark mark: the pubescence is fine and depressed, with some fine, erect, longer setæ. The metasternum is deeply impressed in the middle in front, immediatly behind the suture with the mesosternum, but there are no foveæ on it.

13. **Tomarus heterocerus,** sp. n. (Tab. XVIII. fig. 12.)

Suboblongus, testaceus, thorace rufescente, elytris medio late fuscescentibus ; antennis ante apicem nigris, clava maxime elongata ; fere impunctatus ; prothorace fortiter transverso.

Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

The unusual structure of the antennæ is sufficient to characterize this species : joints 7–10 are black, the terminal joint yellow ; joint 8 is small, but about as broad as long, ninth joint elongate, a good deal longer than broad, tenth a little shorter than ninth, eleventh a good deal smaller. Head broad. Thorax broad, but evidently narrower than the elytra, very little curved at the sides, slightly narrowed behind ; basal impressions minute. Elytra yellow, with a fuscescent band behind the base. Metasternum not foveolate. Two specimens.

14. **Tomarus** —— ?

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

It is well to mention the existence of two specimens similar to *T. abjectus* and *T. heterocerus* in appearance, but having the sides of the thorax faintly crenulate. They appear to represent two species, but are not in sufficiently good preservation for descriptive purposes.

15. **Tomarus lentus,** sp. n.

Brevior, latus, subnudus, minus obsolete punctatus, fuscescens ; pedibus antennarumque basi et apice testaceis ; prothorace fortiter transverso, basin versus angustato ; elytris testaceo-quadriguttatis.

Long. $1\frac{1}{2}$ millim.

Hab. MEXICO, Teapa (*H. H. Smith*) ; GUATEMALA, San Juan in Vera Paz (*Champion*).

This little *Tomarus* may be distinguished by the short broad elytra, much narrowed behind, by the small eyes, and on the under surface by the unimpressed metasternum, which is finely margined between the middle coxæ ; the latter character separates it entirely from the *T. discoideus* group of species, to which, in general form and the structure of the antennæ, it bears most resemblance. Antennæ rather small, joints 6–10 black ; club short. Thorax strongly transverse, much narrower than the elytra, distinctly narrowed behind, strongly lobed at the base in the middle, and with slight indications of a transverse impression ; distinctly punctured ; basal foveæ absent. Elytra distinctly punctured, shining, obscure fuscous, spotted with yellow at the shoulders and just in front of the apex ; sutural stria absent. Three specimens.

EMPOCRYPTUS, gen. nov.

Corpus ovale, breve, convexum, pubescens. Pedes debiles, tarsi articulo 3° parum lobato. Thorax transversus, haud impressus, lateribus multisinuatis.

The small Cryptophagid for which this genus is proposed connects the Telmatophilinæ with the Cryptophaginæ, the third joint of the foot being only very slightly prolonged beneath. Its facies is that of a convex *Atomaria*, with pubescence and antennæ more like those of *Cryptophagus*. The head is small; the antennal club is very abrupt and broad. The sides of the thorax have numerous slight sinuations, forming about six feeble lobes on each side. The middle coxæ are rather widely separated; the suture between them straight, without any trace of a raised margin. The hind coxæ are also rather widely separated. The tarsi are quite slender, moderately long; the fourth joint though small is distinct. The anterior acetabula are not closed behind.

1. **Empocryptus ovalis,** sp. n. (Tab. XVIII. fig. 13.)

Breviter ovalis, convexus, testaceo-ferrugineus, antennarum clava obscura; elytris pube brevi vestitis, subtiliter seriatim punctatis, versus apicem impunctatis.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Antennæ short, joints 4–8 small, club very abrupt, joints 9 and 10 being very broad and short, terminal joint slightly smaller than the tenth and usually a little paler. Head small. Thorax strongly transverse, rather narrower in front than behind; hind angles rectangular, sharply marked. Elytra with a fine, rather dense, nearly erect pubescence, and with distant series of very fine punctures, which entirely disappear on the apical portion. Ventral segments densely, extremely finely, punctured. Epipleuræ broad. Nine specimens.

CŒLOCRYPTUS, gen. nov.

Acetabula anteriora occlusa. Tarsi articulis 3° et 4° subtus lobatis, articulo 5° elongato. Coxæ posteriores latius distantes; abdominis processus intercoxalis latus, subtruncatus.

On the upperside this genus most resembles *Loberus*, but may be distinguished from it by the longer legs, and by the thorax being much narrower than the elytra and narrowed behind. Owing to the anterior acetabula being broadly closed behind, the genus cannot be placed near *Loberus*, but must find its position near *Cryptophilus*, Reitter, which, notwithstanding its *Cryptophagus*-like facies, is placed by Dr. Ganglbauer in the Biphyllinæ. With *Cryptophilus* the present genus appears to have very little real affinity.

The tarsi are 5-jointed; on the hind foot the first joint is longer than the next, the fourth joint is extremely small and can only with difficulty be detected; the third joint

is prolonged under the terminal one to a great extent, and the first and second joints are similarly formed, though their prolonged lobes are shorter. The front acetabula are closed by a broad horizontally placed band.

The other characters are much the same as in *Loberus*, to which genus *Cœlocryptus* would be very closely allied were it not for the closed acetabula.

1. **Cœlocryptus mexicanus,** sp. n.

Rufescens, pedibus testaceis, antennarum clava nigricante, elytris fuscescentibus, humeris dilutioribus; prothorace angusto, parce obsoleteque punctato; elytris breviter pubescentibus, obsolete punctatis, post humeros ad marginem ipsam stria profunda crenata.

Long. $2\frac{1}{8}$ millim.

Hab. MEXICO, Motzorongo (*Flohr*), Jalapa (*Höge*).

This insect is narrower than the other species of the genus. Antennæ rather slender, not elongate, the eighth joint rather smaller than the seventh, so that the club is very abrupt, though it is not very broad; the terminal joint is slightly paler than the two preceding. Head narrower than thorax; the latter is much narrower than the elytra and is slightly narrowed behind; it is sparingly and rather obsoletely punctured, transversely convex, and has a deep transverse impression in front of and very near to the base, deeper at each extremity. The elytra are clothed with fine and short pubescence; the apical portion is almost destitute of punctuation, but there is a slight punctuation on the basal parts: just above, and touching, the lateral margin there is a series of fine confluent punctures, forming a sort of minute crenulation; above this there is a short longitudinal impression, varying greatly in its distinctness. Höge sent twelve examples, Flohr only one.

2. **Cœlocryptus cognatus,** sp. n.

Rufescens, pedibus testaceis, antennarum clava nigricante, elytris plus minusve vage fuscescentibus; prothorace angusto, parce punctato; elytris pubescentibus, subtiliter punctatis, post humeros ad marginem ipsam stria crenulata.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Senahu (*Champion*).

Very near *C. mexicanus*, but slightly larger, broader, and more depressed, with the pubescence a little longer and the punctuation not quite so obsolete. Five specimens.

3. **Cœlocryptus pallens,** sp. n.

Rufo-testaceus, depressus; prothorace transverso, crebre subtiliter punctato; elytris pubescentibus, subtiliter punctatis, post humeros ad marginem ipsam longitudinaliter impressis.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Although closely allied to *C. mexicanus* and *C. cognatus*, this species will be very easily distinguished by the more pallid coloration and the broader thorax. The

ventral segments are more densely and finely punctured, and the impression along the margin of the elytra is rather broader, and when looked at laterally the sculpture in it does not assume the appearance of crenulation. One example.

4. **Cœlocryptus discedens,** sp. n. (Tab. XVIII. fig. 14.)

Sordide ferrugineus, antennis, pedibus elytrisque testaceis; antennis articulis 9° et 10° nigris; subtiliter pubescens et punctatus, prothorace transverso.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

Although extremely similar to *C. pallens*, this insect differs from it in several structural points and will no doubt form a distinct genus. The legs are thicker, and the tibiæ curiously formed, being dilated some little distance beyond the knee, and towards the tip obliquely narrowed; the middle coxæ are more widely separated, the tarsal lobes are shorter, and the transverse impression on the thorax subobsolete. Antennæ rather long, seventh joint perceptibly larger than the eighth or the sixth. Thorax narrowed behind, with a fovea on each side in front of the base, the two being connected by a rather vague transverse impression. Elytra with distinct fine punctuation and pubescence, scarcely seriate; longitudinally depressed along the lateral margin. Under surface densely punctate.

Only one specimen was obtained of this interesting little insect. It is no doubt a male.

Subfam. *CRYPTOPHAGINÆ.*

In this subfamily the tarsi have no lobes, either appendicular or other. I place in it certain forms in which the anterior acetabula are closed behind, though in most of the genera they are open.

ANTHEROPHAGUS.

Antherophagus, Latreille, Règne Anim. éd. 2, iv. p. 507 (1829).

The few species of this genus are found in Europe and N. America; they are probably associated with bees.

1. **Antherophagus ochraceus.**

Antherophagus ochraceus, Melsh. Proc. Acad. Phil. ii. p. 115 [1].

Hab. NORTH AMERICA, Pennsylvania [1].—MEXICO, Ciudad in Durango 8100 feet (*Forrer*); GUATEMALA, Quezaltenango 7800 feet (*Champion*).

The two examples received are in a bad state of preservation. If distinct from the North-American *A. ochraceus*, they are very near to it.

CRYPTOPHAGUS.

Cryptophagus, Herbst, Käfer, iv. p. 172 (1792).

This genus is represented by a large number of species in the Mediterranean region, and by a much smaller number in North America. Although two specimens referable to it are extant in our collections, I doubt whether they are natives of the Central-American region, as these insects are carried about to a considerable extent in straw, &c.

1. **Cryptophagus** ——?

Hab. MEXICO, Mexico city (*Forrer*); GUATEMALA, Zapote (*Champion*).

The two specimens are probably not of one species, but owing to their condition they cannot be determined with any certainty. The Mexican example has the appearance of having been found dead, and the Guatemalan exponent is rather immature. Possibly one or both were carried to the localities in which they were found.

PSEUDHENOTICUS, gen. nov.

Prothorace margine laterali integro, leviter unduloso; tarsis articulis 1°–3ᵐ brevibus, subtus vix lobatis, articulo 4° parvo.

This genus is distinguished from both *Cryptophagus* and *Henoticus* by the peculiar form of the thorax, and by the tarsi making a decided approximation to the Telmatophiline structure, joints 1–3 being markedly different from the fourth and fifth.

I believe that the hind feet are 5-jointed in both sexes.

1. **Pseudhenoticus parallelus,** sp. n. (Tab. XVIII. fig. 15.)

Oblongus, ferrugineus, pedibus testaceis, thoracis medio antennisque (basi excepta) nigricantibus; pube subtili erecta vestitus; elytris subtiliter seriatim punctatis.

Long. $2\frac{1}{3}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Var. Thorace concolore, antennis extrorsum fuscescentibus.

Hab. PANAMA, Peña Blanca (*Champion*).

Antennæ stout, rather short, with very large and abrupt 3-jointed club; joints 4–8 differing but little from one another, each scarcely so long as broad. Head with a small fovea on the vertex, immediately in front of the edge of the thorax. Thorax almost as broad as the elytra, very slightly narrowed in front, hind angles only slightly obtuse; the lateral margin much raised, and in outline irregular, being waved, the front two irregularities of outline being more distinct than the others; finely punctate, without basal impressions. Elytra rather long and narrow, without a sutural stria,

but with regular series of very fine punctures and with a slight punctuation on the interstices; the fine, short pubescence is less depressed than is usual in the Cryptophaginæ. Whether the two specimens really belong to one species is somewhat doubtful, as the example from Peña Blanca, though smaller and with feebler legs, has a more distinct punctuation on the interstices of the elytra. It may, however, be a female of *P. parallelus*.

HENOTICUS.

Henoticus, Thomson, Skand. Col. x. p. 67 (1870).

This genus has hitherto included four or five rare species, one of these being from Mexico and the others distributed in the Palæarctic and Nearctic regions.

1. **Henoticus monticola**, sp. n.

Oblongo-ovalis, crebrius pubescens, sat fortiter (nullo modo seriatim) punctatus; elytris stria suturali subtili.
Long. $2\frac{1}{8}$ millim.

Hab. GUATEMALA, Quiché Mountains 9000 feet (*Champion*).

Antennæ with large concolorous club. Thorax strongly transverse, narrower than the elytra, moderately coarsely and not closely punctured, with the lateral serration very sharp, rather large; there is a basal impression on each side, the two impressions being connected by a transverse depression close to the base. Elytra moderately closely and coarsely punctured, with very distinct pubescence. One specimen.

This insect differs from the European *H. serratus* (Gyll.) by its larger size, clear reddish colour, less coarse and deep punctuation, and longer and thinner legs, as well as by the larger fourth joint of the hind feet.

2. **Henoticus mexicanus.**

Henoticus mexicanus, Reitter, Col. Hefte, xiii. p. 72 (1875) [1].

Hab. MEXICO [1].

From the description, this insect appears to be closely allied to *H. monticola*.

3. **Henoticus compactus**, sp. n.

Oblongo-ovalis, breviter pubescens, minus fortiter (nullo modo seriatim) punctatus; elytris stria suturali subtili.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Cahabon (*Champion*).

Of this species we have received only one example; it is a male, and differs from *H. monticola* in its larger size and shorter pubescence, as well as in the structure of the hind feet, the joints of which are strongly obliquely truncate, and the third furnished

beneath with hairs, giving rise to an appearance of this joint being lobed. The teeth at the sides of the thorax are small. The fourth joint of the hind foot is not visible in this male example. The metasternum is elongate.

4. **Henoticus loberinus,** sp. n. (Tab. XVIII. fig. 16.)

Oblongo-ovalis, testaceus, antennarum clava fusca; parce subtiliter punctatus; prothorace transverso, antice angustato, lateribus minute crenatis; elytris subtiliter pubescentibus, stria suturali subtilissima, sutura anguste fuscescente.

Long. $2\frac{1}{4}$ millim.

Hab. GUATEMALA, Quezaltenango 7800 feet (*Champion*).

Antennæ moderately short, club large, abrupt, joints 9 and 10 strongly transverse. Head coarsely punctate, much narrower than the thorax. Thorax narrower than the elytra, nearly twice as broad as long, a good deal narrowed in front, the lateral margin minutely serrate; punctuation rather fine; a definite punctiform fovea contiguous with the basal margin on each side, this margin strongly raised in the middle. Elytra with fine punctuation and very short pubescence, neither of which is seriate. Metasternum with a large fovea at the most anterior and outer part of its lateral lobe. One specimen.

This is a very distinct species, and will perhaps form a separate genus. The legs are slender, the fourth joint of the hind tarsus is very little smaller than the third joint and is not at all lobed beneath. The specimen is probably a male, as the basal joints of the front feet are slightly enlarged. If it be really a male, the conspicuously 5-jointed hind feet would make the insect a different genus from the European type.

PHAROXONOTHA.

Pharoxonotha, Reitter, Deutsche ent. Zeitschr. 1875, Heft iii. p. 44.

The only species described of this genus was originally found in drugs in Silesia, and was said by Reitter to occur also in Mexico.

1. **Pharoxonotha kirschi.**

Pharoxonotha kirschii, Reitter, Deutsche ent. Zeitschr. 1875, Heft iii. p. 44 [1].

Hab. MEXICO [1], Jalapa (*Höge*).—EUROPE [1].

OTHNIOCRYPTUS, gen. nov.

Tarsi sat graciles, elongati, 5-articulati, articulo 3° nullo modo lobato, 4° parvo libero. Acetabula anteriora late aperta. Coxæ omnes æqualiter distantes. Abdomen segmentis quinque ventralibus inter se æqualiter elongatis.

The species for which this genus is established bears very little resemblance to ordinary Cryptophagidæ, and has rather the appearance of certain Othniidæ or Myceto-

phagidæ. The existence of a distinct, though small, true fourth joint on all the feet removes it, however, from those families, while the unusually short first ventral segment separates it from the majority of Cryptophaginæ. The antennæ have an abrupt three-jointed club. The last joint of the labial palpi is small. The front coxæ are rather small, oval, not prominent, separated by a rather broad space which projects behind as a free process; the side-pieces are produced very little inwards. The tibiæ and tarsi are slender, the former without any (except most minute) spines. The basal three joints of the feet are but little elongate, the first of them rather longer than the second; on the hind feet the basal joint is more elongate. The first ventral segment is but little longer than the apical one.

1. **Othniocryptus variegatus,** sp. n. (Tab. XVIII. fig. 17.)

Testaceus, pube depressa irregulariter vestitus; dense punctatus, irregulariter fusco-variegatus.
Long. 4 millim.

Hab. Panama, Volcan de Chiriqui (*Champion*).

Antennæ moderately long, second and third joints subequal, the third a little the longer and more slender, the fifth and seventh slightly longer than the sixth and eighth; club broad, rather laxly articulated. Head large. Thorax rather narrower than the elytra, a little curved at the sides, about equally broad in front and at the base, lateral and basal margins fine, but quite distinct. Elytra evenly punctured all over, without the slightest sign of any serial arrangement of the sculpture.

The variegation is caused, to a large extent, by the hair, which differs in colour and arrangement here and there. The coloration is, however, evidently variable: on the elytra it consists of darker transverse bands, very irregular, and, with the exception of one or two, much broken up. Two specimens.

HOLOSTERNUS, gen. nov.

Corpus elongatum, nudum. Antennæ breves; clava abrupta, triarticulata. Tarsi 5-articulati, articulis basalibus tribus subæqualibus, brevibus haud lobatis, subtus setosis; articulo 4° libero, 5° elongato. Coxæ omnes parum distantes, posterioribus processu tenui, acuminato separatis. Abdomen segmento primo secundo paullo longiore. Prosternum elongatum, suturæ prosternales obsoletæ.

This and the following genus are closely allied. They differ from the normal Cryptophaginæ in their facies, which suggests an alliance with Rhizophaginæ, to which group they approximate considerably by the structure of the feet and legs, but from which they differ in several characters of greater importance. The prosternum in front of the coxæ is large. The front coxæ are very minute, globular, placed quite at the back of the prosternum, separated only by a very small process, between which and the middle coxæ a wide space intervenes; the acetabula are not closed behind. The middle coxæ are also small and globular, and are externally surrounded only by

the lobes of the meso- and metasternum, without the intervention of any side-piece. The metasternum is elongate. The first ventral segment is, behind the coxæ, slightly longer than the second, which itself is scarcely longer than the third; this and the fourth and fifth are of about equal length. The epipleuræ are narrow. The palpi are small; the terminal joints are not enlarged, that of the maxillary pair twice as long as the preceding. The tibiæ are slender, a little larger towards the tip, which externally is angular.

1. **Holosternus distans**, sp. n. (Tab. XVIII. fig. 18.)

Subdepressus, pallide ferrugineus, nitidus, crebre punctatus; elytris seriatim punctatis; prothorace subquadrato, haud impresso.

Long. 3–3¼ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Eyes scarcely convex. Thorax subquadrate, nearly straight at the sides, front angles depressed, obscure, rounded; lateral margin extremely fine, basal margin scarcely visible, hind angles rectangular; surface moderately finely and closely punctured, without any trace of impressions. Elytra with regular series of fine punctures, the sutural one of which terminates behind as a stria, the outer striæ quite obsolete; the interstices sparingly punctate. Under surface rather more coarsely punctured than the upper, especially on the prosternum; the punctuation not so coarse towards the hinder extremity, especially on the last ventral segment. Two specimens.

ANEPSICUS, gen. nov.

Characteres fere generis *Holosterni*, prosterni suturis profundis discedit.

Although very closely allied to *Holosternus*, I think this must be a distinct genus, the prosternum being shorter and the oblique sutures limiting it remarkably definite. All the coxæ are very slightly separated, and the small size of the front pair and of the prosternal process between them is remarkable.

This genus is one of several that indicate that the condition of the anterior acetabula as regards their being open or closed is of very little importance in this family. In *Anepsicus* the minute prosternal process is greatly bent up behind, and the tips of the side-pieces come very close to it without actually touching it. In *Trogocryptus* the side-pieces reach the prosternal process.

1. **Anepsicus brunneus**, sp. n. (Tab. XVIII. fig. 19.)

Parallelus, nitidus, ferrugineo-testaceus; prothorace subquadrato, margine laterali inconspicuo; elytris seriatim punctatis.

Long. 2–2½ millim.

Hab. MEXICO, Motzorongo (*Flohr*); GUATEMALA, Sinanja in Vera Paz (*Champion*).

Antennæ small, the eighth joint transverse though small, the club nevertheless abrupt.

Head rather small, finely punctured; eyes a little convex, contiguous with the thorax. Thorax broader than long, slightly narrowed behind, transversely convex, the basal and lateral margins extremely indistinct, the latter placed (in front) low down so as to be concealed; anterior angles very much rounded, hinder angles very obtuse; surface shining, not at all impressed, only finely punctured. Elytra with regular series of fine punctures, the inner one of which develops behind into a fine stria, while the outer series are obsolete; interstices not punctured. Legs feeble. Under surface with very little punctuation. Three specimens.

CISSOCRYPTUS, gen. nov.

Antennæ breves, 11-articulatæ; clava magna, abrupta, triarticulata. Tarsi 5-articulati; articulis basalibus tribus parum elongatis, articulo 4° tenuiore, parum elongato, præcedentibus simul sumtis subæquali. Abdomine segmento primo ventrali secundo longiore, segmentis 2°–5^{m} æqualibus brevibus. Coxæ posteriores processu sat lato, acuminato, disjunctæ.

The single species referred to this genus bears a certain resemblance to various Cioidæ, but I think it is really allied to the preceding (*Anepsicus* &c.), from which indeed, so far as I can see, it is distinguished only by a number of characters of subordinate importance. We have only one example, and it is in a very indifferent state of preservation.

The shape of this insect recalls to some extent the genus *Cis*; it is less elongate than the allied forms. The labrum is free and conspicuous. The terminal joints of the palpi are not broad. The prosternum is large, its anterior lateral sutures only moderately distinct. The front coxæ are very small, not prominent, placed quite at the back of the prosternum; the process separating them is slender, and is bent up immediately behind them. The side-pieces approach very near to this process, if they do not actually touch it. The middle coxæ are circular, not prominent, moderately distant; the metasternum is moderately long. The femora project but little beyond the sides of the body. The external apical angles of the tibiæ are well marked, but not prominent.

1. **Cissocryptus insolitus,** sp. n. (Tab. XVIII. fig. 20.)

Parum elongatus, piceus, antennarum basi pedibusque testaceis; prothorace subquadrato, basi et lateribus subtiliter marginatis, angulis anterioribus obtusis, posterioribus fere rectis, sat crebre fortiter punctato, disco bi-impresso; elytris seriatim subtiliter punctatis.

Long. 3 millim.

Hab. MEXICO, Guanajuato (*Sallé*).

Antennæ rather short, joints 4–8 small, the eighth transverse; the terminal three form a broad abrupt club, the ninth and tenth being strongly transverse. Head broad, feebly punctate, the epistome impressed on each side. Thorax almost as broad as the elytra, very slightly curved at the sides and little narrowed behind. Elytra rather short, with distinct series of punctures, the inner of which becomes a stria at the tip;

there is very little interstitial punctuation. Prosternum, mesosternum, sides of the metasternum, and ventral segments closely punctate. One specimen.

TROGOCRYPTUS, gen. nov.

Corpus elongatum, parallelum, nudum, transversim convexum. Tibiæ apicem versus latiores, angulo externo arguto, spinuloso. Tarsi 5-articulati; articulis basalibus tribus brevibus, subtus setosis, articulo quarto parvo, quinto elongato. Acetabula anteriora anguste occlusa.

The insect for which this genus is established has given me much trouble. In working through our clavicorn beetles I have endeavoured to introduce it into several families, but without success, and I can suggest no position for it except amongst the aberrant Cryptophaginæ. We have only one specimen. It looks more like a small Trogositid than an ally of *Cryptophagus*.

The palpi are small, their terminal joints simple. The prosternum is large, the anterior lateral sutures very distinct. The front coxæ are very small, placed quite at the back of the prosternum, not more prominent than the small prosternal process: this is very slender between the coxæ, but immediately behind them is abruptly bent upwards, and its concealed termination is broader, so that the angles touch the tips of the prothoracic side-pieces, though there is no union between them. The middle coxæ are not broadly separated; the metasternum forms an angular process between them. The mesosternal epimera are excluded from the acetabula by a sort of broad margin of the mesosternum; the coxæ, though globular, are rather large. The metasternum is elongate. The five ventral segments are subequal in length. The legs are short and stout. The epipleuræ are very narrow. The femora scarcely extend beyond the sides of the body. The tibiæ are broad and spinose at the tip. The tarsi have the basal joints but little thicker than the terminal.

This insect and the preceding genus (*Cissocryptus*) have a very important bearing on the classification of the clavicorn series of Coleoptera, and it is a matter for sincere regret that each of them is at present known by only a single example.

1. **Trogocryptus nigripectus,** sp. n. (Tab. XVIII. fig. 21.)

Flavescens, prothorace medio sternisque nigris, antennis extrorsum fuscescentibus; prothorace polito, sparsim punctato, margine laterali subtilissima, fere occulta; elytris seriatim punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. Guatemala, Cahabon (*Champion*).

Antennæ short, the club abrupt, the ninth and tenth joints being strongly transverse. Head very feebly punctured, bearing two large depressions transversely placed; eyes rather small, but convex; clypeus emarginate in front; labrum large, rounded in front. Thorax about as long as broad, with the angles greatly rounded, the basal and lateral margins very fine, the lateral one placed low down and, in front especially, difficult to see; an obscure depression on each side some little distance in front of the base; the

surface very polished and shining, pallid, with a black mark along the middle, the few punctures concentrated on each side of the middle. Elytra with very distinct series of punctures, the internal series becoming an impressed stria behind. Abdominal segments almost impunctate. Mesosternum strongly punctate, as are also the sides of the prosternum proper and of the metasternum. One specimen.

Subfam. *ATOMARIINÆ.*

CÆNOSCELIS.

Cænoscelis, Thomson, Skand. Col. v. p. 266 (1863).

This genus is found in both the Palæarctic and Nearctic regions, but includes only three or four species, and appears to be everywhere rare.

1. **Cænoscelis optata** sp. n.

Ferruginea, subtiliter pubescens; prothorace haud transverso, crebre fortiter punctato, ante basin depresso; antennis sat crassis, clava biarticulata.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Antennæ with third joint small, not much more than half as long as the second; ninth joint but little larger than the eighth. Thorax long, shining, coarsely and not densely punctured, with a broad impression at the base in the middle. Elytra finely punctate and pubescent. One specimen.

Extremely similar to the European *C. ferruginea*, Sahlb., but readily distinguished from it by the coarser thoracic sculpture.

EPHISTEMUS.

Ephistemus, Stephens, Ill. Brit. Ent., Mandib. ii. p. 167 (1829); Ganglbauer, Käf. Mitteleurop. iii. p. 737.

This genus consists, as limited by Dr. Ganglbauer, of two European and one North-American species. One is known to me from within our limits.

1. **Ephistemus distans,** sp. n.

Ovalis, sat convexus, niger, nitidus; antennis pedibusque flavis, illis clava nigra.
Long. 1 millim.

Hab. GUATEMALA, near the city, Aceituno, Zapote (*Champion*).

This minute insect is almost free from sculpture and very polished. The upper surface is unicolorous black, the head being reddish only about the mouth-parts. The outline is quite continuous, the thorax and elytra are very accurately united, the base of the thorax sloping on each side to form an angle in front of the scutellum, and the shoulder of the elytra (seen from the side) appearing to slightly overlap the base of the

thorax. The antennæ are yellow, but the broad and abrupt three-jointed club is dark. The yellow legs are extremely slender and rather long. Four specimens.

Compared with the European *E. gyrinoides*, Marsh., this is a very distinct species, the form being rather broader and flatter, the legs more slender, and the club of the antennæ black. I have not seen *E. apicalis*, Lec., the North-American species of the genus, but it has the elytra red behind and the antennæ entirely yellow.

Subfam. *BIPHYLLINÆ.*

This subfamily has consisted up to the present time of about a dozen species; the large series of forms found in our region is therefore remarkable and unexpected.

The position of these insects has been the subject of prolonged difference of opinion. I here follow Dr. Ganglbauer in placing them with the Cryptophagidæ, as they have but little affinity with Mycetophagidæ. The Biphyllinæ are specially characterized by the structure of the feet, which are 5-jointed, the third joint being furnished at the tip with a free membranous appendage. They are singularly uniform in the structure of the sternal pieces, and the generic characters are to be found in the details of structure of the antennæ and feet, and in the peculiar lines and impressions found on the metasternum and abdomen.

The group is probably richer than is at present believed, as I possess undescribed forms from Borneo and Australia.

GONICŒLUS, gen. nov.

Metasternum utrinque linea post-coxali profunde impressa, elongata, posterius longius ducta.

I place in this genus a considerable number and variety of forms closely allied to *Diplocœlus*, but agreeing in the possession of very strongly marked elongate lines behind the middle coxæ. This is the only character I can detect common to all the species and at the same time foreign to *Diplocœlus*. The club of the antenna is always 3-jointed, and exhibits in no case any tendency to approach that of *Biphyllus*. The pair of lines between the hind coxæ is present in a highly developed form, as in all the Biphyllinæ I have seen; but there is no trace of the line behind the coxa going to the outer margin of the abdomen, and this distinguishes *Gonicœlus* from several others of the subfamily.

The first division of the genus includes several remarkable forms in which the head or the thorax, or both, is armed with projections or horns. I have long had in my collection a specimen of this kind and had not suspected its close affinity with *Diplocœlus*, but the long series of species brought together by our Editors places the position of these forms beyond doubt.

I divide the species of *Gonicœlus* into three groups, the third of which contains numerous small and obscure forms very closely allied, but in some cases with peculiar

structures on the head in the male sex. These prominences apparently offer good specific characters, but cannot be used for making a further division of the genus. I may, however, call attention to a slight but valuable character for the distinction of certain species:—When the scutellum is so broad and short as to appear merely like a raised line, there is usually a slight depression extending a little way on each side of it, and giving rise to the appearance of a short margin at the base of the elytra; but when the scutellum is not so extremely short (in *G. hystrix*, e. g.) there is no trace of this spurious basal margin.

GROUP I.—Comparatively large insects, scarcely ever less than 5 millim. in length; the head or thorax, or both, armed in the male sex with prominences or even horns; the front tibiæ unemarginate at the base.—Species 1–8.

1. **Gonicœlus unicornis,** sp. n. (Tab. XVIII. fig. 22, ♂.)

Ovalis, parum convexus, piceus, nitidus, elytris seriatim fortiter punctatis, pubescentia suberecta sat dense vestitis; prothorace dorso nitido, anterius in medio tantum parce et subtiliter punctato.
Long. 5–5½ millim.
Mas, prothoracis margine anteriore cornu decurvato armata; capite utrinque plicato-elevato, inter elevationes impunctato.

Hab. GUATEMALA, Panima in Vera Paz (*Champion*); PANAMA, Volcan de Chiriqui 3000 feet, Boquete, Bugaba (*Champion*).

This species is distinguished by the less convex form and by the very shining middle portion of the thorax. At the sides of the thorax there are numerous very coarse punctures, not separated into groups by any distinct smooth spaces; the hind angles are acute and very definite. The elytra are furnished with very numerous setæ, which do not hide the sculpture or prevent the surface from appearing shining; the punctures of the series are large except near the suture, and the interstitial punctuation is distinct. The sculpture of the under surface is excessively fine and the ventral intercoxal lines are very fine.

In the female the anterior-marginal line of the thorax is distinct in the middle and a little angularly sinuate there. Twenty-three specimens. Two females from Caldera are aberrant and may possibly belong to another species.

2. **Gonicœlus tricornis,** sp. n.

Ovalis, sat convexus, nigricans; elytris seriatim fortiter punctatis, pubescentia suberecta sat dense vestitis; prothorace dorso elevato, anterius in medio fortiter punctato, angulis anterioribus minus longe productis.
Long. 5 millim.
Mas, prothorace in medio cornu (basi crassa) decurvato; capite utrinque cornu acuminato, breviore armato.
Fem. prothorace linea marginali in medio interrupta.

Hab. PANAMA, Bugaba (*Champion*).

This remarkable little insect is distinguished from *G. unicornis* by the less prolonged

anterior angles of the thorax, and by the less coarse lateral punctuation, as well as by differences of the male and female characters. One pair.

3. **Gonicœlus relictus,** sp. n.

[*Femina.*] Ovalis, parum convexus, nigricans, nitidus; elytris seriatim sat fortiter punctatis, pubescentia suberecta minus elongata sat dense vestitis; prothorace dorso punctato, linea marginali in medio interrupta.
Long. 6 millim.

Hab. Panama, Volcan de Chiriqui 3000 feet (*Champion*).

Although we have received only a single female of this species its characters are sufficiently distinctive. It is the most elongate of this group, and in shape is very similar to *G. unicornis*: from the female of that species it is readily distinguished by the punctate disc of the thorax and the interruption of the anterior-marginal line; while from the female of *G. tricornis* the more elongate form, the comparatively smooth head, the longer front angles of the thorax, and the disc of the thorax flatter and more evenly punctured, render it sufficiently distinct. The sides of the head are more elevated over the insertion of the antennæ than they are in the allied species, and we may anticipate that the male will prove to have this part still more peculiarly formed.

4. **Gonicœlus rudis,** sp. n.

Ovalis, sat convexus, nigricans; elytris seriatim fortiter punctatis, pubescentia suberecta sat dense vestitis; prothorace dorso elevato, anterius in medio fortiter punctato.
Long. $5\frac{1}{2}$–6 millim.
Mas, capite inæquali, vertice in medio subtuberculato, utrinque vix plicatim elevato.

Hab. Panama, Caldera in Chiriqui 1200 feet (*Champion*).

Although very similar to *G. unicornis*, this species is on comparison readily distinguished by the more elevated, less polished disc of the thorax; this elevation causes the angular fovea on each side of it to be larger and deeper. The anterior-marginal line of the thorax is uninterrupted in the middle and straight. The head of the male is very different from that of *G. unicornis*, and the thoracic horn is absent. The coxal lines of the abdomen are very distinct.

5. **Gonicœlus germanus,** sp. n.

Ovalis, sat convexus, nigricans; elytris seriatim fortiter punctatis, pubescentia suberecta sat dense vestitis; prothorace dorso elevato, anterius in medio fortiter punctato.
Long. $5\frac{1}{2}$–6 millim.
Mas, capite inæquali, vertice in medio tuberculato, post tuberculum canaliculato; prothorace margine anteriore rude discreto, in medio tuberculo minuto acuminato.
Fem. linea marginali in medio obsoleta.

Hab. Mexico (*Sallé*), Jalapa (*Höge*); Nicaragua, Chontales (*Janson*).

Although extremely similar to *G. rudis*, this species is readily distinguished by the

tubercle on the head of the male being divided behind and the division continued backward as an obscure channel in which a very minute angular projection from the middle of the front margin of the thorax plays. The female may be identified by the interruption in the middle of the marginal impressed line of the thorax: in this character it agrees, I believe, with the female of *G. tricornis*. Five specimens.

6. **Gonicœlus brevicollis,** sp. n.

Oblongo-ovalis, parum convexus, niger, nitidus, fortiter punctatus; elytris fortiter seriatim punctatis, pube erecta minus dense vestitis.
Long. $5\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Höge*), Tuxtla (*Sallé*).

Differs from *G. mexicanus* in the much coarser punctuation, narrower form, more scanty pubescence, and rather shorter antennæ. It is still closer to *G. germanus*, but has a shorter and more coarsely punctate thorax, the anterior-marginal line of which is straight in the middle, and the hind angles not acute. The three species are similar in the male characters. In the male of *G. brevicollis* the projection from the thoracic marginal line is extremely minute, and the discoidal tubercle of the head is well marked. It is not improbable that this is a small form of *G. germanus*, notwithstanding the shorter thorax. The two specimens are in a bad state of preservation.

7. **Gonicœlus mexicanus,** sp. n.

Latior, ovalis, subdepressus, nigricans, sat nitidus; antennis piceis, pedibus piceo-rufis; prothorace disco crebrius subtiliter punctato, punctis lateralibus parum numerosis; elytris dense vestitis, seriebus punctorum quatuor prope suturam persubtilibus.
Long. $5\frac{3}{4}$ millim.

Hab. Mexico, Jalapa (*Höge*).

Rather larger than *G. unicornis*, and readily distinguished by the different sculpture of the thorax and the very fine series of punctures on the middle of the elytra. The antennæ are unusually long, the club very abrupt and the setæ on it unusually long. Thorax very broad in proportion to the length, much narrowed in front, hind angles acute; it is rather closely and finely punctured on the middle from front to base, and the larger lateral punctures are less numerous and distinct than usual; the crenation of the lateral margin is very fine. The outer series of punctures on the elytra are rather coarse, but the internal ones become progressively finer, so that the one near the suture is almost obliterated. The under surface is formed and sculptured almost as in *G. unicornis*.

We have received only one specimen of this fine species; it is doubtless a male. The head is broad and short, the eyes large; on the middle there is a tubercle, from which a channel proceeds backward; on the thorax there is a small angular projection of the middle in front, received into a depression on the head as in *G. germanus*. This

species is readily distinguished from *G. germanus* by the broader less convex form and the fine punctuation of the elytra.

8. **Gonicœlus celatus,** sp. n.

Ovalis, parum convexus, nigricans; antennarum basi pedibusque rufis; prothorace parum elongato, angulis anterioribus brevibus, posterioribus vix acutis; elytris pube suberecta dense vestitis, seriatim minus fortiter punctatis.

Long. $4\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Very similar in form to *G. unicornis*, but readily distinguished by the anterior marginal line of the thorax being broadly interrupted in the centre. The head has a small tubercle on the middle. The thorax has the front angles but little prominent, and the hind angles are almost rectangular; there is much coarse punctuation at the sides, the disc is rather convex and has some larger punctures scattered amongst the fine punctuation. The scutellum is very distinct. The inner series of punctures on the elytra are very fine. The under surface is very similar to that of *G. unicornis*. Three examples.

The individual above described is no doubt a male; the other two specimens have no distinct tubercle on the middle of the head. The smaller size, shorter thorax, and the finer inner series of punctures readily distinguish this species from the female of *G. germanus*.

GROUP 2.—Comparatively large insects, scarcely ever less than 5 millim. in length; the head armed at most with a tubercle; the front tibiæ emarginate at the base, strongly in the male, slightly in the female.—Species 9–19.

9. **Gonicœlus hirtus,** sp. n.

Minus elongatus, ovalis, convexus, rufus, pube suberecta, elongata, concolore sat dense vestitus; prothorace basi elytris paulo angustiore, ante scutellum impresso, dorso subtiliter punctato; elytris seriatim fortiter punctatis.

Long. $4\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This *Gonicœlus* appears to be by no means closely allied to any but the following one. We have received only a single male; in sculpture and clothing it is more nearly allied to *G. celatus* and its allies, but by the male-characters it comes nearer to the *G. parnoides* group of species. The antennæ are short. The prothoracic anterior marginal line is deep at the sides, but broadly interrupted in the middle. The shape of the prothorax is peculiar: it is not very much broader near the hind angles than it is in front, but it is a little sinuate at the sides behind, so that the angles are directed a little outward and are minutely acute; the crenulation of the lateral margins and the sculpture at the sides are coarse, the dividing smooth spaces being very indistinct.

The prosternal process is broader than usual and slightly flexed upwards. The sculpture of the flanks of the thorax is quite fine, as in *G. unicornis*. The metasternal channel is short and fine.

The unique individual appears to be, as I have said, a male; but this is not certain. There is no armature on the head and the excision at the base of the front tibia is smaller than it is in the male sex of *G. parnoides* and its immediate allies.

10. **Gonicœlus cultratus,** sp. n.

Minus elongatus, ovalis, convexus, rufus, pube sat elongata suberecta vestitus, fortiter punctatus; prothorace seriatim, fortiter, parce punctato.

Long. $4\frac{7}{8}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 feet (*Champion*).

This is another species of which we have received only a single example. Though *G. cultratus* bears a certain resemblance to *G. hirtus*, it is really very distinct from it, and is characterized by the fact that the prosternum on the middle is marked with impressed lines that do not extend to the extremity of the process, nor do they reach the front of the prosternum. The individual appears to be a male; it has a very minute tubercle on the middle of the head; the base of the front tibia, as in *G. hirtus*, has only a small excision, but, unlike that species, the correlative cultriform process at the extremity of the femur is unusually largely developed. The antennæ are short. The thorax is much narrowed in front, there is much coarse punctuation at the sides, the disc is convex, but is slightly longitudinally depressed on the middle, and on the median area has rather numerous coarse punctures subseriately arranged. The punctures of the elytra are rather large and distinct. The sculpture of the flanks of the prothorax is fine and regular. The prosternal process is a little bent upwards. The metasternal channel is fine and moderately deep.

11. **Gonicœlus longicornis,** sp. n.

Ovalis, elongatus, posterius attenuatus, sat convexus, pube brevi dense vestitus, piceus; antennis pedibusque rufis; prothorace punctis majoribus minus seriatis, ante scutellum impresso; elytris seriebus punctorum minus grossis.

Long. $6\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Although we have only females of this species, I must consider it as distinct from *G. parnoides*, from the corresponding sex of which it differs as follows:—the antennæ are much longer, the marginal line of the thorax is quite distinct in the middle, and the smooth spaces near the sides of the thorax are indefinite. On the under surface the prosternal process is strongly bent upwards, and the metasternal channel is only fine.

This is undoubtedly a very distinct species, the much longer antennæ distinguish it

from all the preceding and many of the following species, and the last joint of the labial palpus is remarkably large. The emargination of the front tibia is scarcely perceptible. Two specimens.

12. **Gonicœlus mediocris,** sp. n.

Anguste ovalis, posterius attenuatus, sat convexus, pube brevi dense vestitus, piceus; antennis pedibusque dilutioribus; prothorace ad latera punctis majoribus seriatis, ante scutellum profunde impresso; elytris seriebus punctorum minus grossis.
Long. $5\frac{1}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Eyes projecting but little laterally. Thorax rather long, the anterior angles not very prominent, the posterior angles rectangular; the anterior marginal line not interrupted; the coarse punctuation at the sides consists of very numerous but not very large punctures and is somewhat indistinctly divided by longitudinal smooth spaces; the disc is rather finely punctate, and there is a broad depression in front of the scutellum. The flanks of the prothorax are almost destitute of sculpture.

The shorter pubescence readily distinguishes this species from many others; this, in conjunction with the extremely fine sculpture of the flanks of the prothorax, separates it from most of the allied forms. There is a very slight emargination of the inner edge of the front tibia below the knee. One specimen, probably a female.

13. **Gonicœlus parnoides,** sp. n. (Tab. XVIII. figg. 23, ♂; 23 *a*, front tibia and tarsus, ♂.)

Ovalis, posterius attenuatus, sat convexus, pube brevi dense vestitus, piceus; antennis pedibusque rufis; prothorace ad latera punctis majoribus seriatis; elytris seriebus punctorum minus grossis.
Long. $5\frac{1}{2}$–6 millim.

Hab. Mexico, Cordova (*Sallé*).

This species is similar to *G. mediocris* in many respects, but it has the prosternal process more bent and the channel on the metasternum remarkably deep. On the upperside, the best characters for distinguishing the two are the broader head and more prominent eyes, and the less deep impression in front of the scutellum of *G. parnoides*; it has also the anterior marginal line of the thorax indistinct in the middle. The antennæ are long. Thorax with the anterior angles little prolonged, the posterior angles acute; the longitudinal spaces dividing the punctate lateral area are very strongly developed; the disc is but little punctate. The male is rather larger and broader in front than the female; the head is more coarsely punctate, and has the middle of the front part more raised. The front tibiæ have in the male a large deep excavation below the knee, while in the female they have a smaller one and are not so nearly simple as in the female of *G. mediocris*. One male, two females.

14. **Gonicœlus latus,** sp. n.

Ovalis, latus, subtus convexus, nigricans; corpore pube densa vestito; prothorace punctis majoribus paucis; elytris fere obsolete seriatim punctatis.
Long. $5\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

This is a very distinct species, on account of the broad form, the dense pubescence, and the more obsolete sculpture. It appears, however, to be structurally very near to *G. parnoides*. The antennæ are rather long. The thorax is large, the front angles but little produced, the hind angles slightly acute; the marginal line is not interrupted in front, and is continued along the sides for half their length in a definite manner; there is a depression in front of the scutellum; near the hind angles there are a few (10 or 12) large punctures: this is all the sculpture, the surface being clothed with fine pubescence. A similar clothing obscures the sculpture of the elytra, but the series of punctures are very distinct at the sides. The flanks of the prothorax show no sculpture, only a fine pubescence. The prosternal process is rather broad between the coxæ and is bent upwards. The metasternum is convex, its channel fine.

One female. It has a small but very definite excision of the front tibia below the knee.

15. **Gonicœlus guatemalenus,** sp. n.

Oblongo-ovalis, sat convexus, pube brevi vestitus, niger; antennis pedibusque piceis; prothorace minus subtiliter punctato, punctis majoribus versus latera minus discrete seriatis; elytris seriebus punctorum minus grossis; metasterno late profundeque impresso.
Long. $6\frac{1}{8}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

We have received only one specimen of this fine species; it is a male. Allied to *G. parnoides*, from which it is readily distinguished by the black colour, the different thoracic sculpture, and the remarkably large impression on the metasternum. The flanks of the prothorax have a very fine sculpture, and there are also some larger but subobsolete punctures on this part. The prothorax has a somewhat coarse punctuation on the front part, the lateral punctures are not very large, and the smooth spaces between them are not very definite and but little convex; the anterior margin is distinct in the middle; the front angles are short, the hind angles rectangular. The inner series of punctures on the elytra are distinct, though fine. The head and front legs are formed in the male much as they are in *G. parnoides*.

16. **Gonicœlus vestitus,** sp. n.

Ovalis, parum convexus, piceus, pube pallidiore elongata vestitus; antennis pedibusque rufis; prothorace minore, elytris paullo angustiore; elytris seriebus punctorum internis distinctis.
Long. $5\frac{1}{8}$ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, San Juan in Vera Paz (*Champion*).

This is easily distinguished from all the other species of *Gonicœlus*, *G. securiger* excepted, by the long pallid pubescence of the upper surface, which is conspicuous even on the head and thorax. The head is small, the antennæ long. The thorax is short, and at the base is slightly narrower than the elytra; the hind angles are rectangular; the marginal line is distinct in the middle in front; the basal margin is dilated in front of the scutellum; the few coarse punctures at the sides behind are not separated by depressions or elevations. The last joint of the labial palpus is very large, but not securiform. The flanks of the thorax have no large punctures. The prosternal process is narrow and much bent upwards.

Two specimens; the head is quite destitute of elevations and the front tibiæ are simple: they may both be females.

17. **Gonicœlus securiger,** sp. n.

Ovalis, parum convexus, piceus, pube pallidiore elongata vestitus; antennis pedibusque rufis; prothorace minore, elytris paullo angustiore; elytris seriebus punctorum internis obsoletis.

Long. 5 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

Very similar to *G. vestitus*, but with numerous distinctive characters, and very remarkable by the excessive development of the last joint of the labial palpi, which is extremely broad and securiform. Thoracic marginal line subobsolete in front. Antennæ unusually long and slender, the club loosely articulated.

Two specimens: they bear no indication of their sex.

18. **Gonicœlus hystrix,** sp. n.

Anguste ovalis, parum convexus, niger, pube elongata erecta concolore vestitus; antennis pedibusque rufis vel piceis; prothorace elytris fere angustiore, dorso irregulariter fortiter punctato; elytris seriebus internis punctorum minus obsoletis.

Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*).

This species is distinguished from all the preceding by the numerous coarse punctures on the under surface of the body, and by their especially large development on the flanks of the thorax; it is also remarkable by the straight, upright, setiform pubescence. The antennæ are moderately long. The head is coarsely punctate, without any tubercles. The thorax is small, the front angles very little produced, the marginal line very distinct in the middle in front, the hind angles rectangular, the basal margin not dilated in front of the scutellum; the coarse lateral punctuation is extensive, and there is much rather coarse punctuation on the middle. Prosternal process narrow, much bent upwards.

Eleven specimens; there is a slight emargination of the front tibia, but I do not find any sexual distinctions.

19. **Gonicœlus championi,** sp. n.

Anguste ovalis, parum covexus, piceus, pube elongata erecta vestitus; antennis pedibusque rufis; prothorace elytris fere angustiore, dorso irregulariter fortiter punctato; elytris seriebus internis punctorum minus obsoletis.

Long. 5 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

We have received only one example of this species. It is a male, and differs from *G. hystrix* in having a fine pliciform tubercle on the middle of the head near the front, and two extremely minute angular projections on the middle of the front margin of the thorax; the emargination of the front tibia is more definite and the larger punctures on the metasternum are much less conspicuous.

GROUP 3.—Small insects, never attaining 5 millim. in length, rarely $3\frac{1}{2}$ or 4; the head of the male sometimes armed, but the front tibiæ never emarginate. The anterior marginal line of the thorax usually less distinct than it is in the first two groups. —Species 20–38.

20. **Gonicœlus throscoides,** sp. n.

Ovalis, posterius attenuatus, convexus, niger, antennis pedibusque rufis, pube flavescente depressa vestitus; prothorace elytrisque subtilius punctatis.

Long. $3\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui (*Champion*).

Head very little punctate. Thorax accurately adapted to the elytra, much narrowed in front; marginal line definite and very distinct in its deflected sides; the coarse lateral punctuation much finer than in the species of Group 2; the hind angles are a little acute; the basal margin is very fine and indistinct. The series of punctures on the elytra are unusually fine, and the dense fine pubescence is more depressed than usual. The flanks of the prothorax are very densely, but finely sculptured. The pubescence of the under surface is extremely fine and minute. The metasternum is almost destitute of a channel. One specimen.

Although this insect has no striking peculiarities it does not appear to be closely allied to any except the following species. The definite anterior marginal line of the thorax and the somewhat larger size suggest that *G. throscoides* may prove, when the male is known, to come near some of the species placed at the head of the genus; but I think it more probable that it is really allied to *G. subtilis*. It is distinguished from that species by the complete absence of a depression extending laterally from the angles of the scutellum.

21. **Gonicœlus subtilis,** sp. n.

Ovalis, posterius attenuatus, sat convexus, niger, antennis pedibusque rufis, pube flavescente vestitus; pro-

thorace fortiter transverso, linea marginali anteriore discreta, dorso subtilius punctato; elytris versus suturam seriebus punctorum omnino obsoletis.

Long. $3\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

In the male of this species there is a short longitudinal carina on the middle of the front of the epistome, and on the vertex above this a shallow depression; over the insertion of each antenna there is a strongly raised, rather short carina directed outwards and backwards, and there are a few punctures between these structures; the marginal line has two minute granules on the middle. In the female the carinæ are absent. *G. subtilis* is distinguished from all the following species, *G. chontalenus* excepted, by the fact that, when viewed from above and behind, the anterior marginal line can be distinctly traced along all the middle of the thorax. The species may be known by the punctuation near the suture of the elytra being more than usually obsolete, and the punctuation on the disc of the thorax scanty and fine.

I have treated as a variety three specimens from Bugaba in which the punctuation of the thorax and the sutural portion of the elytra is distinctly coarser. The male characters do not, however, differ from those of the other examples.

22. **Gonicœlus chontalenus,** sp. n.

Suboblongus, parum elongatus, haud depressus, rufescens, longius pubescens; prothorace haud fortiter transverso, linea marginali anteriore sat discreta; elytris punctis versus basin sat magnis, versus apicem obsoletis.

Long. 3 millim.

Hab. NICARAGUA, Chontales (*Janson*).

An obscure species, but apparently to be distinguished from the others it resembles by the anterior marginal line of the thorax being visible in the middle. The thorax is but little narrowed in front; the punctuation on the disc is rather fine and not dense; the anterior marginal line is deflexed near each side and is more prolonged backwards than usual in the small species of the genus, indeed from one point of view it appears to reach the base. The series of punctures on the elytra are very distinct at the base and the punctures large; but the sutural series is quite indistinct.

I am uncertain as to the sex of the unique individual. The surface of the head is a little uneven, and there is an obscure depression on the vertex, and a very slight angulation of the front margin of the thorax in the middle.

23. **Gonicœlus planus,** sp. n.

Oblongus, angustus, subdepressus, rufus, pubescens; prothorace transversim subquadrato, dorso crebre fortiter punctato, versus latera parum sculpturato; elytris seriatim punctatis.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

Of this species we have received only a single specimen in a very bad state of preservation, but as it shows the extreme of the genus as regards narrow and parallel form, I have named it. It is less convex than *G. crispatus* and *G. angustus*, and I judge that the pubescence is much shorter; the example is, however, much worn. It is a male; there is a slight longitudinal elevation on each side of the front of the head, and between these elevations the space in the middle is longitudinally convex and is sub-tuberculate behind. The antennæ and legs are very short. The thorax is nearly parallel-sided, very slightly narrowed in front; the hind angles are rectangular, sharply marked; the disc is rather coarsely and closely punctured, the intra-lateral sculpture and lines extremely indistinct; there is no anterior marginal line. Elytra very regularly, rather finely seriate-punctate. Metasternum with a very short channel behind.

24. **Gonicœlus crispatus,** sp. n.

Angustus, oblongus, piceo-rufus, antennis pedibusque rufis, pube fulvescente, in elytris seriata, dense vestitus; prothorace dorso crebre subtiliter punctato; elytris seriatim subtiliter punctatis.

Mas, capite utrinque crista valde elevata, in vertice intus crispata; prothorace margine anteriore medio leviter sed late producto, parte producta leviter emarginata.

Long. $2\frac{3}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This little insect is in the male sex readily distinguished by the strongly elevated crest on each side of the head, and by this crest being curled inwards at the summit; the surface between the elevations is depressed and not punctured. The female is destitute of these characters, the head being nearly flat and punctured in the ordinary manner. The thorax is very little narrowed in front, transversely convex, less strongly transverse than usual, and with the coarse lateral punctuation much reduced. In addition to the serial punctuation of the elytra, there is a fine seriate interstitial punctuation. The metasternal process between the middle coxæ is strongly margined and the metasternum is canaliculate behind.

25. **Gonicœlus angustus,** sp. n.

Oblongus, angustus, haud depressus, rufus, pube fulvescente vestitus; prothorace parum transverso, dorso crebrius punctato; elytris seriatim subtiliter punctatis.

Long. $2\frac{3}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

Very similar to *G. crispatus*, but undoubtedly distinct, the metasternum being unchannelled, and there being numerous other slight distinctions. The unique example is a male, it having a slight longitudinal elevation on each side of the front part of the head, and the surface between these elevations is opaque and almost impunctate. The antennæ and legs are very short. The thorax is scarcely narrowed in front, the hind angles are rectangular, the disc is rather closely punctured. There is no anterior marginal line on the thorax; near the side there is a very fine elevated

line, and inwards from it a still more obscure one; lateral punctuation apparently absent. The punctuation of the elytra is fine. The pubescence is rather shorter than it is in *G. crispatus*, and the head is not so wide.

26. **Gonicœlus bimargo,** sp. n.

Angustulus, parallelus, rufescens, subopacus, pubescens; prothorace linea intra-laterali integra; elytris substriatis, striis fortiter sed parum profunde punctatis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Paraiso (*Champion*).

This insect, though very similar to *G. crispatus*, appears not to be closely allied to it or to any other species described here; it may be recognized by the definite lateral line near the side of the thorax, which extends the whole length and is somewhat thickened and raised at the front margin; the true lateral margin is much concealed by this false margin, being placed lower down, and also a little finer than usual. The thorax is rather coarsely and closely punctured; the coarse sculpture contiguous with the pseudo-marginal line is very dense. The elytra are dull; the sculpture consists of series of large shallow punctures, giving rise to the appearance of shallow grooves or striæ when viewed in certain lights.

We have received only one specimen of this distinct, though in appearance commonplace, species. I do not know its sex; there is no peculiar structure on the head.

27. **Gonicœlus spheniscus,** sp. n.

Angustus, convexus, parallelus, ad apicem attenuatus, rufescens, pube sat elongata vestitus; prothorace haud fortiter transverso, margine laterali subtili, medio anterius crebre subtiliter, posterius parum punctato.
Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

One of the narrower and less depressed species, with the thorax not very short and apparently without any strongly marked distinctive character. It is rather more elongate than *G. crispatus* and *G. angustus*, and the apex of the body is a little more acuminate. The antennæ are short and very stout. The head is broad, moderately punctate, the eyes rather large. Thorax straight at the sides behind, the posterior angles rectangular; near the side in front there is a short, fine, raised line, which on the front margin is continued inwards for a very short distance, but is so fine as to be detected with difficulty, the sculpture near this lateral line is not coarse; the lateral margin itself is finer than it is in most of the other species of the genus. The serial punctuation of the elytra is very fine and regular. One specimen.

28. **Gonicœlus humilis,** sp. n.

Angustus, oblongus, convexus, pube pallida sat elongata vestitus, piceus; antennis pedibusque rufis; subtiliter punctatus, elytrorum seriebus fere obsoletis.
Long. vix 3 millim.

Hab. MEXICO (*Truqui*), Jalapa (*Flohr*).

In the male of this species the front of the head is flat, and there is only a short, obscure, somewhat curved elevation over the insertion of each antenna; there is a slight depression on the middle of the vertex. The species is readily identified by the much effaced punctuation of the elytra. The thorax is rather strongly transverse, the sides straight behind, a little narrowed in front; the hind angles are rectangular, not acute; the sculpture is unusually fine, though there are numerous punctures on the discoidal portion; the lateral sculpture is also much less marked than usual; there are no distinct lateral lines, and only an extremely short obscure line on the front margin on each side. Two specimens.

This species seems to be intermediate between *G. angustus* and *G. segnis*. It comes near *G. angustus* by the male characters, but it is less elongate, less parallel and transversely convex in form, and has the elytral punctuation less definite, and the thorax without lateral lines. It is narrower than *G. segnis*, and readily distinguished from it by the fine sculpture.

29. **Gonicœlus laticollis,** sp. n.

Ovatus, posterius attenuatus, subdepressus, piceus, pube elongata vestitus, fortiter punctatus; prothorace fortiter transverso, anterius angustato.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, Sinanja in Vera Paz (*Champion*).

Of this species we have received only a single male specimen. It is very like a large *G. arduus*, but is clearly distinct. The carinæ on the head do not extend to the vertex, but are each surmounted by a peculiar slight elevation, looking like a truncated tubercle; the two minute acute elevations on the front of the thorax are placed close together. The thorax has the whole of the discoidal part closely and rather coarsely punctured; it is slightly wider than the elytra, and is considerably narrower at the front angles than at the base; the hind angles are acute, and the base is but little lobed in front of the scutellum. The punctuation of the elytra is coarser than usual. The colour is dark, the antennæ being blackish and the reddish tibiæ are piceous at the tips. The species bears a considerable resemblance in form to *G. subtilis*.

30. **Gonicœlus arduus,** sp. n.

Oblongo-ovalis, depressus, rufo-obscurus, pube elongata vestitus, fortiter punctatus; prothorace fortiter transverso, linea marginali anteriore medio minus late interrupta.

Long. $2\frac{1}{4}$–$3\frac{3}{4}$ millim.

Hab. GUATEMALA, El Tumbador, Zapote (*Champion*); PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

In this insect the male has on each side a longitudinal carina extending from the insertion of the antenna to the back of the head, while in the female there are the merest indications of these carinæ. *G. arduus* is to some extent a connecting-link

between the species with well-marked anterior marginal thoracic line and those without. There is on the thorax a fine intra-lateral line which is turned inwards along the front margin and extends as far as the carina on the head, and there is sometimes an extremely minute tubercle at the point in question. The thorax is a little narrowed in front; the disc is rather coarsely punctate, and in front somewhat closely. The punctures of the elytra are moderately coarse and the interstices narrow. The rather long pubescence does not prevent the surface from being shining.

We have received a fair series of this species; it varies a little in colour, sculpture, and size.

31. **Gonicœlus muticus,** sp. n.

Oblongo-ovalis, depressus, fusco-rufus, antennis pedibusque rufis; fortiter punctatus, pube elongata sat dense vestitus, subnitidus.

Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Jalapa (*Höge*).

The male of this species has no peculiar conformation of the head, which is coarsely punctured, and shining between the punctures. The thorax is strongly transverse, not broader than the elytra, coarsely punctate, the lateral punctuation but little different from the discoidal; lateral and anterior lines scarcely indicated. The elytra have the serial punctures unusually large and the interstitial punctures almost absent; the pubescence is suberect, so as not to dull the surface. Four specimens.

32. **Gonicœlus concolor,** sp. n.

Oblongus, minus elongatus, sat convexus, rufus, pubescens, minus fortiter punctatus; prothorace transverso, anterius parum angustato, basi ante scutellum profunde depressa; elytris post scutellum punctis numerosis, subtilibus, haud seriatis.

Long. vix 3 millim.

Hab. PANAMA, Volcan de Chiriqui 6000 to 8000 feet (*Champion*).

This species is apparently destitute of salient peculiarities, though it may be distinguished from *G. angustus* and others that are like it by the marginal lobe behind being placed lower than the disc of the thorax. This character, in combination with distinct and numerous fine punctures on the basal sutural part of the elytra, will probably lead to its recognition. We have received only two specimens, and they exhibit no character that may be distinctive of the male. It is perhaps nearest to *G. segnis.* The thorax is rather strongly transverse, broad in front, the anterior angles somewhat prominent, the punctuation fine, the anterior marginal line on each side quite short. The serial punctuation of the elytra is a little finer than usual.

33. **Gonicœlus segnis,** sp. n.

Oblongo-ovalis, postice subattenuatus, subdepressus, piceus, antennis pedibusque rufis; minus fortiter punctatus,

pube pallida vestitus; prothorace fortiter transverso, dorso crebre punctato; elytris regulariter, haud fortiter seriatim punctatis.
Long. 3–3¼ millim.

Hab. MEXICO (*Truqui*), Cordova (*Sallé*), Jalapa (*Höge*).

The male of this species has a short carina on each side of the head, terminated by a very minute tubercle; on the front of the thorax there are two approximate minute tubercles or granules. The thorax is scarcely broader than the elytra and is not much narrowed in front; it has no distinct marginal lines, but there is a sort of hook-mark on each side of the front margin caused by two extremely short raised lines, one outside the other, both turning inwards. The series of punctures on the elytra are fine, and those on the interstices quite distinct.

We have received about a dozen examples of this obscure and uninteresting species.

34. **Gonicœlus monticola,** sp. n.

Oblongo-ovalis, convexus, niger, pube pallida conspicue vestitus, antennarum basi pedibusque piceis; prothorace marginibus lateralibus minus obsolete serratis.
Long. 3½ millim.

Hab. GUATEMALA, Totonicapam 8500 to 10,500 feet (*Champion*).

We have only one example of this insect, but, like most of the other Coleoptera from this elevated locality, it appears to be a very distinct species. Head broad, dull, very little punctured, feebly and broadly bi-impressed, but without definite elevations. Thorax rather strongly transverse, scarcely broader than the elytra, a good deal narrowed in front; the front angles produced and acute, the hind angles rectangular; the lateral margin distinct and more evidently serrate than in any other species of the genus; there are no longitudinal elevations near the sides, and the coarse sculpture there is but little developed; the middle of the thorax is moderately coarsely, rather closely punctured; there is but little trace of an anterior marginal line, and none at all of a prolongation backward from it. The punctuation and pubescence of the elytra are well-marked; but the obscure punctuation of the interstices is scanty and not regular.

35. **Gonicœlus oopsis,** sp. n.

Ovalis, convexus, niger, pedibus piceis, minus dense et longe pubescens, fortiter punctatus, parum nitidus; prothorace dorso subtiliter punctato, præterea punctis majoribus seriatis.
Long. 3½ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

Distinguished from the other members of the genus by the fact that there are distinct larger punctures on the disc of the thorax. In several species of *Gonicœlus* traces of this serial punctuation can be seen, but in no other is it distinct. The head is broad. The thorax is rather strongly transverse, a good deal narrowed in front, the larger punctures near the sides very coarse, the outer series continued a short distance

along the front margin so as to form a deep, though very short, stria; on the disc with punctures placed in five series, besides some fine ones. The series of punctures on the elytra are distinct, moderately large. Two specimens of doubtful sex, there being no peculiar structures on the head or thorax.

36. **Gonicœlus sellatus,** sp. n.

Oblongus, subdepressus, rufus; elytris plaga magna communi nigra; pube pallida, elongata sat dense vestitus. Long. 3 millim.

Hab. GUATEMALA, near the city, Capetillo, Zapote (*Champion*).

Club of antennæ only moderately broad. Head broad, coarsely punctate, edge of the epistome obscurely elevated over the insertion of each antenna; eyes with much lateral extension, more prominent than in most of the allied species. Thorax strongly transverse, slightly broader than the elytra, the posterior angles acute and sharply marked, the sides almost straight till near the front angles, then distinctly narrowed; the disc coarsely punctate; anterior marginal line absent; sides densely rugosely punctured, without lines or serial arrangement of the sculpture. Elytra red, with a large oblong black patch close to the base, the sculpture rather coarse.

We have received a large series of this species; it varies but little and can be readily recognized by the colour. I have identified the sexes, but cannot point out any striking external mark for distinguishing them. In examples that are well preserved a very minute bituberculation of the middle of the front of the thorax may be detected, and this is probably a male character.

37. **Gonicœlus deplanatus,** sp. n.

Ovalis, posterius attenuatus, depressus, flavo-ferrugineus; capite thoraceque plus minusve obscurioribus; prothorace fortiter transverso, disco fortiter punctato; elytris seriatim punctatis, interstitiis omnium subtilissime dense punctatis, subopacis.
Long. $2\frac{1}{2}$–3 millim.

Hab. MEXICO, Cordova, Teapa (*Sallé*), Motzorongo (*Flohr*); BRITISH HONDURAS, Belize, Rio Hondo (*Blancaneaux*); GUATEMALA, San Juan, Senahu, Chacoj, and Tamahu in Vera Paz, Champerico, Zapote (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Volcan de Chiriqui, Bugaba (*Champion*).

This appears to be the most widely distributed and least rare species of the genus, and is at the same time the most easily distinguished, the very short and broad thorax, with strongly punctured disc, and the peculiar interstitial punctuation making it recognizable at a glance. The colour is more pallid than in its allies, but this is rather variable. I cannot distinguish the sexes by any external character.

Thorax with a very short, definite anterior marginal line, which is slightly prolonged backwards; hind angles directed backwards, acute; the pubescence abundant.

Elytra with regular and distinct series of punctures, which are a good deal masked by the short abundant pubescence, and are very indistinct behind.

38. **Gonicœlus mollis,** sp. n.

Ovalis, convexus, piceus; antennis pedibusque rufis, thorace sæpe nigricante; pube erecta vestitus, nitidus; elytris seriatim punctatis.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Capetillo, Cerro Zunil (*Champion*).

This is a very aberrant species, with more slender antennæ than usual, finely facetted eyes, and small prosternal process; on the upperside it is readily distinguishable by the soft erect pubescence. The thorax is greatly narrowed in front, and bears two raised lines on each side parallel with the lateral margin, the hind angles acute; disc convex, in front of the scutellum rather deeply impressed, so that the hind margin forms a sort of lobe in front of the scutellum. The elytra bear regular series of punctures, those near the suture being very obscure indeed, the others are made somewhat indistinct by the abundant pubescence; there is usually a more or less distinct band of white colour across the middle, due to the hair being more pallid there. Seven specimens.

DIPLOCŒLUS.

Diplocœlus, Guérin, Icon. Règne Anim., Ins. p. 196 (1838).

This genus occurs in both Europe and North America, being represented by two or three species in each case. Of the two species here added, *D. bicolor* seems to be nearly allied to those already described; *D. parvus* is aberrant.

1. **Diplocœlus bicolor,** sp. n.

Convexus, dense subtilissime pubescens, opacus, rufo-obscurus; elytris pectoreque nigricantibus, elytris minus discrete seriatim punctatis.
Long. 3 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Rather shorter in form and more convex and compact than the European *D. fagi*, Chevr., and with thinner antennæ. Head moderately broad, without elevations, finely punctured. Thorax very strongly transverse, transversely convex, the lateral margin fine and very densely set with quite short setæ; the sculpture much obscured by the minute pubescence; near the side with a fine raised line, which is a little curved inwards in front, without being continued along the front margin; a second much more obscure line nearly parallel with this exists; the disc is convex, very obscurely punctured, the hind margin thickened in front of the scutellum. Scutellum clothed with grey hair. Elytra with the sutural series of punctures almost obliterated, the

more external series present, but much masked by the short clothing, which, viewed in certain directions, is seen to have very fine lines of slightly more elevated pubescence in it. Two specimens.

2. **Diplocœlus parvus,** sp. n. (Tab. XVIII. fig. 24.)

Ovalis, depressus, dense pubescens, fusco-rufus; antennis piceis vel rufis; pedibus rufis; prothorace valde transverso, dorso parce punctato, lateribus crebre fortiter punctatis.
Long. 2–2¼ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, El Tumbador, Las Mercedes (*Champion*); PANAMA, Volcan de Chiriqui (*Champion*).

Head broad and short; eyes less coarsely facetted than usual in the Biphyllinæ. Thorax broad, extremely short, front angles but little produced, sides minutely serrate, no anterior margin, except behind the eye; there is some coarse lateral punctuation, and a fine raised line reaching the front margin at the extremity of the line behind the eye; the irregularly distributed punctures on the disc are but little different from the lateral punctures. The elytra have series of punctures much obscured by the short abundant pubescence. The tibiæ are short and very slender. Seven specimens.

I have placed as a variety of *D. parvus* four specimens from Cerro Zunil and Senahu in Guatemala, in which the form is narrower, the thorax less narrowed in front, and the punctuation on its disc scarcely visible.

This species is somewhat aberrant, on account of the thin linear tibiæ, the small tarsi, and the somewhat more distinct, though short, mesosternal line.

EUDEROPUS, gen. nov.

Corpus ovale, pube setisque vestitum. Tarsi tenues, posteriores tenuissimi, lobis liberis ægre discernendis. Metasterno post coxas intermedias, et abdomine post coxas posteriores, lineis inscriptis munitis.

These characters are sufficient to distinguish this genus. The lines behind the posterior coxæ are found in *Biphyllus*, as well as in *Anobocœlus*, but from the former this genus is abundantly distinguished by the three-jointed club of the antennæ, and from the second by the slender legs; the prosternal process is but small, and is bent up behind the coxæ; the middle coxæ are rather widely separated. The character by which the genus will be most easily recognized is the extremely slender, hair-like, hind tarsi, in which it is difficult to see the divisions between the joints.

1. **Euderopus brevipes,** sp. n.

Ovalis, sat latus, niger; antennis pedibusque rufis; elytris seriatim fortiter punctatis, pube parum conspicua haud variegata vestitis, setis reclinatis sat elongatis.
Long. 2 millim.

Hab. GUATEMALA, Capetillo (*Champion*).

We have only one badly-preserved example of this species; it is more like a

Gonicœlus than the others of the genus, and has the tarsi less elongate, though very slender; the series of punctures on the elytra are also more distinct. The antennæ are short. The thorax is much narrowed in front, and has a fine raised line parallel with its margin; there is no second lateral line, but there is an obscure anterior marginal line. One or two of the series of punctures near the suture on the elytra are obliterated, but the other punctures are rather large. The prosternal process is very minute, and the femora scarcely reach the sides of the body. The hind tarsi, though not very long, are extremely slender.

2. **Euderopus perbrevis,** sp. n.

Breviter ovalis, convexus, breviter pubescens, opacus, fusco-ferrugineus; antennis pedibusque rufis; elytrorum seriebus punctorum obliteratis.
Long. 2 millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, Senahu (*Champion*).

This species differs from all the others of the genus, except *E. microps*, by the very short form, so that it is much attenuated in front and behind. The head is small; the anterior marginal line of the thorax is quite distinct; the setæ on the elytra are but little developed, and the series of punctures are very much obliterated; two series are, however, quite distinct just behind the shoulder, though the punctures are small. One specimen from each locality. The Mexican one is in a very bad state of preservation.

3. **Euderopus microps,** sp. n.

Breviter ovalis, convexus, pubescens, subopacus, ferrugineus; antennis pedibusque testaceis; elytrorum seriebus punctorum subtilibus, seriebus internis obliteratis.
Long. $1\frac{3}{4}$ millim.

Hab. GUATEMALA, Panima in Vera Paz (*Champion*).

This is the smallest of the Biphyllinæ I have seen, and it has a smaller head than any of its allies. The thorax is excessively short. The two internal series of punctures on the elytra are obliterated, but the others can be seen for most of the length. Two specimens.

I have treated as a variety of *E. microps* a single specimen from the Volcan de Chiriqui; it is slightly larger, and the punctuation and pubescence are a little different.

4. **Euderopus unicolor,** sp. n.

Ovalis, convexus, brunneo-ferrugineus; antennis pedibusque rufis; elytrorum punctis seriatis tantum post humeros conspicuis.
Long. $2\frac{1}{2}$, lat. $1\frac{1}{3}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head rather broad (for this genus). Thorax greatly narrowed in front, the raised line parallel with the margin very distinct, the sculpture very indistinct in consequence

of the pubescence, the anterior marginal line obsolete, the fringing hairs at the sides long, pallid. On the elytra the serial punctuation consists of only a few large punctures at the shoulder; the pubescence is rather abundant, but does not prevent the surface from being shining.

5. **Euderopus iteratus**, sp. n.

Ovalis, sat latus, sat convexus, brunneo-ferrugineus; antennis pedibusque rufis; elytris seriebus externis punctorum sat discretis.

Long. $2\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is nearest to *E. brevipes* and *E. regularis*, but it differs from them in having the series of punctures on the elytra less distinct; in colour *E. iteratus* resembles *E. unicolor*, but it is smaller and much less convex than that insect, and has the outer series of punctures less obliterated; the pubescence, too, is not so elongate. The thorax is very short, and the anterior marginal line is quite distinct. One specimen.

6. **Euderopus regularis**, sp. n.

Ovalis, latus, sat convexus, flavescens, superne fusco-brunneus, antennarum clava fusca; elytris seriatim sat fortiter punctatis, seriebus internis obsoletis.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

A regularly oval, not very convex insect, with the setæ of the upper surface less developed than in *E. setosus* and *E. chætophorus*; it agrees with *E. brevipes* and *E. iteratus* in the sculpture, but has somewhat longer and more slender tibiæ, and differs a little from both in outline. The club of the antennæ is large and dark. The thorax has an indistinct second marginal line, which is continued all across the front, forming a distinct anterior marginal line; there is a very slight punctuation on the disc, which is a little shining; the marginal fringe is not very long. The outer series of punctures on the elytra are very distinct, the inner two are obliterated. Two specimens.

7. **Euderopus setosus**, sp. n.

Ovalis, convexus, piceus, supra niger; antennis pedibusque rufis; elytra ad latera anterius seriatim punctatis.

Long. $2\frac{1}{2}$ millim.

Hab. PANAMA, Volcan de Chiriqui 2000 to 3000 feet (*Champion*).

Head armed with elongate setæ. Thorax greatly narrowed in front, the lateral line distinct, the anterior marginal line distinct but fine, the lobe in front of the scutellum larger than usual. Elytra armed with setæ directed backwards and arranged in rows; behind the shoulder on each side with three or four abbreviated series of punctures.

8. **Euderopus chætophorus,** sp. n. (Tab. XVIII. fig. 25.)

Ovalis, convexus, piceus, antennis pedibusque rufis, supra pube grisescente setisque nigris variegatus; elytrorum punctatura seriata.

Long. $2\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

This species is very remarkable on account of the variegate shimmer of the upper surface and the beautiful regular development of the system of setæ. These are arranged in rows, and each seta is directed backwards, so that when looked at from the front they appear on the thorax and elytra like fine raised lines; the setæ on the head are very conspicuons. The minute pubescence that gives the variegation to the surface varies in pattern according to the direction it is viewed from. In other respects the species comes close to *E. setosus*. The long slender hind tarsi are remarkable. Five specimens.

ANOBOCŒLUS, gen. nov.

Corpus sat elongatum et transversim convexum, pube subtilissime vestitum, lineis pubescentiæ subtilissimis exaratum. Pedes crassiusculi, tibiæ posteriores tarsis certe duplo longioribus. Acetabula intermedia et posteriora lineis postice vergentibus munitis. Antennarum clava valida, triarticulata.

I establish this genus for some little insects apparently of the greatest rarity, so that I cannot give the characters very fully. The three highly developed pairs of lines on the under surface are very remarkable; the pair behind the posterior coxæ extend to the outer edge of the abdomen. The comparatively thick legs are very different from those of *Euderopus*. These structural peculiarities, in conjunction with the three-jointed club of the antennæ, distinguish *Anobocœlus* from all the other genera of Biphyllinæ. The prosternal process seems to differ a little in the two species, but the front coxæ are considerably less approximate than they are in *Euderopus*.

1. **Anobocœlus optatus,** sp. n.

Ferrugineus, pube minutissima subflavescente vestitus, vix perspicue sculpturatus; prothorace lineis decem subtilissimis exarato.

Long. 3 millim.

Hab. Mexico, Vera Cruz (*Sallé*).

Head broad, with large eyes. Thorax strongly transverse; a good deal rounded at the sides, front angles scarcely prominent, surface densely but very indistinctly punctured, and with ten perfectly straight very fine lines, of which the four on the middle part are more approximate. Elytra with the sculpture extremely minute and obscure, covered with an extremely minute pubescence, and having on each about ten perfectly straight lines caused by minute depressed setæ. Two specimens, both in fragments.

2. **Anobocœlus championi,** sp. n. (Tab. XVIII. fig. 26.)

Fuscus, opacus, pube minutissima vestitus, vix perspicue sculpturatus; prothorace elytrisque lineis subtilissimis exaratis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*).

We have only one specimen of this species: as it is worn and somewhat damaged, I cannot speak with precision as to the details of pubescence and sculpture. Though very similar to *A. optatus*, I do not doubt that it is distinct. The thorax is a good deal sinuate at the base on each side, and the lines of pubescence are very obscure. The scutellum is strongly transverse, and there is an impressed line on each side of it, giving the appearance of a basal margin along the middle part of the elytra. The elytra have regular series of obscure punctures.

Fam. LATHRIDIIDÆ *.

The Lathridiidæ include, as at present composed, about 400 species, all minute insects. The family is, however, unsatisfactory, inasmuch as it contains heterogeneous elements, and at the same time is not satisfactorily distinguished from either Colydiidæ or Erotylidæ. It is supposed to be characterized by the 3-jointed tarsi, but as some of the Colydiidæ have 3-jointed feet it is evident that the characters require reconsideration, and I am of opinion that, if retained as distinct from Colydiidæ, at any rate the whole of the Merophysiinæ should be removed from Lathridiidæ to the family in question.

The North-American species have recently been monographed by H. C. Fall, and I have followed his arrangement and pretty nearly his generic views. We have received only a small series of about twenty species, but I have no doubt that these obscure little insects are really much more numerous in our region. Fall recognizes fully 100 N.-American species.

Subfam. *MEROPHYSIINÆ.*

HOLOPARAMECUS.

Holoparamecus, Curtis, Ent. Mag. i. p. 186 (1833).

This genus of minute Coleoptera comprises about twenty species, and is widely distributed, though most of the described forms are from the Palæarctic Region. Fall recognizes six species as found in the United States.

* By D. SHARP.

1. **Holoparamecus singularis.**

Holoparamecus singularis (Beck), Belon, Rev. Ent. Fr. 1897, p. 160[1]; 1900, p. 92[2].

Hab. MEXICO, Jalapa (*Höge*).—EUROPE; ASIA; AFRICA.

The single specimen from Jalapa quite agrees with a British exponent of this species. It has been previously recorded from North America, but, according to Fall, erroneously. The synonymy is extensive and to a considerable extent doubtful. It is given in detail by Belon [1].

2. **Holoparamecus pumilus,** sp. n.

Angustus, convexus, pallido-testaceus; oculis haud coloratis, in medium capitis laterorum sitis, a prothorace remotis; prothorace ante basin parum discrete impresso.

Long. $1\frac{1}{4}$ millim.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

This little insect is remarkable on account of the apparent absence of eyes, which are, however, represented by a pallid prominent space on each side of the head placed near the antenna and far from the thorax. It has only ten joints to the antennæ, the tenth being large and cyathiform, and of itself forming the club. The head is long and narrow. The thorax is a little narrowed behind, about as long as broad; it is rather convex, much depressed at the base; but there are no distinct impressions, though in certain lights a very short line is visible extending a little forwards from the base near each hind angle. The elytra are convex, with a well-marked sutural stria. The surface is very shining. One specimen.

M. Belon has established the genus *Blumenus* for a small Brazilian species having 10-jointed antennæ, with one joint to the club. Except in this respect, our insect appears to have little relation to *B. villiger*, and I think it better to treat it as a *Holoparamecus*.

3. **Holoparamecus brosciformis,** sp. n. (Tab. XIX. fig. 1.)

Elongatus, angustus, rufo-testaceus, antennis pedibusque testaceis, politus; oculis magnis, prothoracis marginem fere attingentibus; prothorace elongato, ad basin fortiter angustato, ante basin in medio et utrinque profunde foveolato.

Long. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This is a very distinct species of the subgenus *Calyptobium*, the antennæ being formed of eleven clearly separated joints. The surface is highly polished, there being only very feeble traces of punctuation. The antennæ have the ninth joint transverse; the club is 2-jointed, the first of the two joints being large, transverse, the terminal joint much smaller, transverse, obliquely truncate. The thorax is rounded at the sides in front and strongly narrowed behind, deeply impressed in front of the base, there being a fovea at each hind angle and a large deep depression between them, which shows

traces of being formed by two confluent impressions. Elytra elongate, with a deep sutural stria, impunctate. Femora thick.

I see no differences in the nine examples Mr. Champion found of this species.

4. **Holoparamecus constrictus,** sp. n.

Elongatus, in medio constrictus, rufo-piceus, antennis pedibusque testaceis, subpolitus, omnium minutissime punctulatus; oculis mediocribus, prothoracis marginem haud attingentibus; prothorace ante basin profunde impresso; elytris convexis, subinflatis.

Long. $1\frac{1}{2}$ millim.

Hab. MEXICO, Chilpancingo in Guerrero 4600 feet (*H. H. Smith*).

Another very distinct species of the subgenus *Calyptobium*. The antennæ are slender, the ninth joint not transverse, though broader than the eighth; tenth joint large, subcyathiform, receiving the small terminal joint, the part of which that is seen is obliquely truncate and strongly transverse. The eyes are coarsely facetted, but are small and do not touch the angles of the thorax. The thorax is rather long, convex, greatly narrowed behind, deeply foveolate at each hind angle, and with a transverse impression in front of the base. The elytra are slender, convex, much rounded at the sides and narrowed behind, polished, but with a scanty punctuation and an extremely minute setosity that is difficult to detect; there is a well-marked sutural stria. One specimen.

EVOLOCERA, gen. nov.

Corpus breviter ovale, fere glabrum. Antennæ decem-articulatæ, clava biarticulata. Palpi breves, crassi. Oculi prominuli. Prosternum processu parvo, libero. Pedes breves. Metasternum breve.

This insect may be placed between *Cholovocera* and *Merophysia*, from the former of which it differs in numerous details; the most important is, that the middle coxæ are much less widely separated and the division between the metasternum and mesosternum indistinct; the prosternal process is small and narrow, strongly carinate, and is received in a minute cavity at the junction of the meso- and metasternum. The structure is thus very different from that of *Cholovocera* and more similar to that of *Merophysia*. There are coxal lines on the first ventral segment, but none on the metasternum.

The specimens have all been mounted in gum-tragacanth, and the structure of the tarsi cannot properly be made out.

1. **Evolocera championi,** sp. n. (Tab. XIX. fig. 2.)

Breviter ovalis, superne convexa, ferruginea, antennis pedibusque testaceis, minutissime punctata et setosa, nitida; prothorace ad basin ipsam transversim impresso, impressione utrinque a plica brevi terminata.

Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Juan in Vera Paz (*Champion*).

Antennæ short; first and second joints thick, the following joints up to the eighth small; ninth large, not quite so long as broad, tenth not quite so large as the ninth. Head broad and short; eyes small but prominent. Thorax very short and broad, closely applied to the elytra, the front angles not prominent; running along the basal margin there is a fine transverse depression, rendered conspicuous only by the short longitudinal elevation that limits it on each side. There is no sutural stria on the elytra.

We have received a small series of this species. According to a note of Mr. Champion's, it lives in ants' nests.

FALLIA, gen. nov.

Corpus rotundatum, superne convexum, glabrum. Antennæ 8- vel 9-articulatæ; clava magna, uniarticulata. Coxæ omnes minutæ, globosæ, haud prominentes, anteriores modice separatæ; prosternum absque processu libero.

This is a peculiar genus, with the compact form of certain Corylophidæ. The antennæ are somewhat geniculate, to permit of the first joint being deflexed in a short groove at the inner margin of the eye; the first joint is short and broad, the second thick, still shorter, the third and fourth elongate (or the fourth divided into two, making the antennæ 9- instead of 8-jointed); fifth to seventh small, eighth forming a large club. Eyes prominent, contiguous with the base of the antennæ. Palpi short and thick; mentum minute. Prosternum very short, abruptly bent upwards behind the coxa, closing the acetabula. Mesosternum large, separated by a straight line from the metasternum; its anterior part abruptly declivous in correlation with the back of the prosternum, above this projecting so as to form an apparently free triangular process (as in certain Sphæridiides). Hind coxæ small, globose, widely separated. Abdomen with an elongate basal ventral segment and four short ones.

The genus will be readily identified by the very minute globose hind coxæ, which are separated from the side by a space three or four times their own diameter. The metasternum has a small notch for each of these coxæ, so that it is probable that it is really folded over them, and that these are larger than they appear to be: in other words, I anticipate the structure will be found to be similar to that of the Discolominæ.

Fallia is no doubt closely allied to *Aphanocephalus*, Woll., but it is a much less remarkable form, the pronotum being normal in shape and arched in front, so as not to completely cover the head or eyes, while the parts of the body beneath are much less perfectly co-adapted; the epipleuræ are much less developed, and all the coxæ are less widely separated.

I regret that we have only a very few examples of any of the species, so that the characters cannot be fully investigated, but it is not unlikely that the genus will be

found to connect the Cholovocerous series of Lathridiidæ with the Discolominæ *, and this will probably involve the removal of the Merophysiinæ to the family Colydiidæ, where, in my opinion, they would be best placed.

The late Mr. Matthews proposed a new family, Pseudocorylophidæ, for *Aphanocephalus*, which, as I have already said, is doubtless closely allied to *Fallia*. But this family must disappear, Horn having long previously proposed the family Discolomidæ for some allied forms. According to my own views, all these species are aberrant Colydiidæ; but whether this view be adopted or not, the name Pseudocorylophidæ is clearly superfluous.

I have named this interesting genus in recognition of the value of Mr. H. C. Fall's recent work on the North-American Lathridiidæ.

1. **Fallia synthetica,** sp. n. (Tab. XIX. fig. 3.)

Breviter elliptica, nigra, nitida, antennis piceis, pedibus sordide rufis, fere impunctata; elytrorum margine laterali argute elevato, vix subexplanato; epipleuris latis, horizontalibus, minutissime punctatis et setosulis.

Long. corp. $1\frac{1}{2}$, lat. 1 millim.

Hab. PANAMA, Caldera in Chiriqui (*Champion*).

Thorax and elytra of nearly unbroken outline, with acutely elevated margin. Scutellum large, triangular. Upper surface almost impunctate. There are no impressions on the thorax, and no sutural stria on the elytra. The under surface is without sculpture, except for the minute punctuation of the broad epipleura, which is continued along the flanks of the prothorax. The legs are quite short, the femora broad but flat. Four specimens, all in bad condition.

2. **Fallia minor,** sp. n.

Elliptica, nigra, nitida, antennis piceis, pedibus sordide rufis, fere impunctata; elytrorum margine laterali subtili; epipleuris horizontalibus, sat latis.

Long. $1\frac{1}{4}$ millim.

Hab. BRITISH HONDURAS, Rio Hondo (*Blancaneaux*); GUATEMALA, Pantaleon (*Champion*).

Closely allied to *F. synthetica*, but smaller and narrower, and with the lateral margins of the elytra, and the epipleura, less broad. We have received nine specimens of this minute insect. One of those from Honduras, however, probably belongs to a different species, as it is of more rotund form, and has a distinct, though extremely fine, punctuation on the upper surface.

* The specimens have only recently been placed in my hands. Had I been able to study them in connection with the Discolominæ, I believe I should have placed the genus in that group, although the inadequate material does not permit me to decide with certainty that these insects possess the curious structure of the metasternum characteristic of the Discolominæ.

3. **Fallia punctulata,** sp. n.

Ovalis, sat convexa, nigra, antennis pedibusque piceis, nitida, corpore parce irregulariter punctato.
Long. 2 millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Caldera in Chiriqui (*Champion*).

In this species the antennæ and the legs are much more slender than in *F. synthetica*; the antennæ are quite distinctly 9-jointed, the fourth joint of the latter (which even in that species shows traces of consisting of two joints) being replaced by two joints. The body is covered with a very irregular scattered punctuation. The margins of the thorax and elytra are less developed, and the epipleura are not so completely horizontal as in *F. synthetica*. The minute hind coxæ appear to be placed entirely in the metasternum. Two specimens.

Subfam. *LATHRIDIINÆ.*

CONINOMUS.

Coninomus, Thomson, Skand. Col. v. p. 217; Fall, Trans. Am. Ent. Soc. xxvi. p. 119 (1899).
Lathridius (subgen. *Coninomus*), Belon, Rev. Ent. Fr. 1897, p. 174.

This genus includes, according to Belon, twenty-six representatives, and is largely represented in the Antipodes. Fall records three of the species as occurring in the United States.

1. **Coninomus constrictus.**

Lathridius constrictus, Hummel, Ess. Ent. iv. p. 13 [1]; Belon, Ann. Soc. Linn. Lyon, xlvi. p. 158 (1899) [2].
Coninomus constrictus, Fall, Trans. Am. Ent. Soc. 1899, p. 120 [3].

Hab. NORTH AMERICA [2].—GUATEMALA, San Gerónimo, Dueñas, Capetillo, Quiche Mountains 7000 to 9000 feet (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 8000 feet (*Champion*).—SOUTH AMERICA [3].—EUROPE [1].

2. **Coninomus muticus,** sp. n.

Angustus, piceus, antennis pedibusque testaceis; prothorace ad latera profunde inciso; elytris seriatim fortiter profundeque punctatis, interstitiis haud carinatis.
Long. 1½ millim.

Hab. PANAMA, Volcan de Chiriqui 8000 feet (*Champion*).

This small *Coninomus* may be placed next *C. constrictus*, from which, however, it is very distinct by the smaller size, narrower form, and the absence of carination of the elytral interstices. The antennæ are very short, the club 2-jointed, very abrupt. The head is rather long, rugose, slightly sulcate along the middle, the sulcus ending in an obscure fovea; eyes rather large, separated from the thorax by a space nearly

the length of the eye. Thorax long and narrow, without supplementary membrane, the side behind the middle deeply incised; the surface coarsely rugose, very indistinctly bicarinate behind; a deep fovea close to each lateral excision, and a feeble groove along the middle. The sculpture of the elytra is remarkably deep and regular, and the traces of carination arising from the greater elevation of some of the interstices are extremely slight. One specimen.

3. **Coninomus** ——?

Hab. PANAMA, Volcan de Chiriqui 4000 feet (*Champion*).

We have received a single specimen of a very interesting Lathridiid, in which the thorax is shaped like that of *Conithassa*, but has two obsolete longitudinal elevations, while the elytra are very strongly multicostate. Unfortunately, this individual is not in sufficiently good preservation for description.

ENICMUS.

Enicmus, Thomson, Skand. Col. v. p. 223 (1859).

This genus includes thirty-four representatives, and is very widely distributed. Fall records eighteen species from the United States, no less than twelve of which he treats as new.

1. **Enicmus guatemalenus,** sp. n.

Angustus, parum convexus, ferrugineus, antennis pedibusque testaceis (elytris interdum nigricantibus); prothorace transverso, subtiliter rugoso, ante basin minus profunde transversim impresso; elytris profunde fortiter seriatim punctatis.

Long. $1\frac{1}{4}$ millim.

Hab. GUATEMALA, Capetillo, Cerro Zunil, Panajachel (*Champion*).

This species belongs to the subgenus *Enicmus* proper, though the prosternal carina is very fine; it somewhat resembles the European *E. transversus*, and in Fall's tables would come near *E. fictus* and *E. mimus*. The club of the antenna is long and slender, the ninth joint not transverse. The head is almost as long as broad, densely rugose, very feebly sulcate along the middle, the eyes moderately large, the postocular space scarcely so long as the eye, not divergent. Prothorax transverse, but small and narrower than the elytra, a little rounded at the sides, with a transverse depression in front of the base extending completely across; the surface rugose. Elytra with regular series of large, deep, closely placed punctures extending to the tip, none of the interstices carinate.

CARTODERE.

Cartodere, Thomson, Skand. Col. v. p. 219 (1859); Belon, Rev. Ent. Fr. 1897, p. 183; Fall, Trans. Am. Ent. Soc. 1899, p. 135.

There are about thirty described species of this genus. They are very minute elegant insects, and some of them appear to be nearly cosmopolitan.

1. Cartodere filum.

Lathridius filum, Aubé, Ann. Soc. Ent. Fr. 1850, p. 334[1]; Fall, Trans. Am. Ent. Soc. 1899, p. 139[2]; Belon, Rev. Ent. Fr. 1897, p. 187[3].

Hab. North America, United States[2].—Mexico[3].—Europe[1].

Said by Belon[3] to be very common in Mexico, and reported by Fall to have occurred two or three times in the United States. We have received no species that resembles *C. filum* from any part of our region. Belon does not mention the insect in his recapitulation of the Lathridiidæ of South America, and we may be pardoned for supposing that his subsequent citation[3] of it as Mexican is an error.

2. Cartodere falliana, sp. n. (Tab. XIX. fig. 4.)

Convexa, minus elongata, ferruginea; prothorace transverso, inæquali, ante medium et ante basin profunde transversim depresso; elytris dense profundeque punctatis, singulo longitudinaliter bicarinato.

Long. $1\frac{1}{8}$ millim.

Hab. Mexico, Cordova (*Sallé*).

Antennæ 10-jointed, the club 2-jointed; basal joint very large, subglobose; second joint large, globose, only about one-fourth the size of the basal one; third joint subglobose, not half the size of the second; fourth joint very long and slender; fifth to eighth each slightly shorter and broader than the preceding, each longer than broad; ninth large, triangular, quite as long as broad. Head largely explanate on each side; eyes small, convex, each consisting of seven or eight coarse facets; postocular interval as long as the diameter of the eye. Thorax with the posterior angles free, projecting backwards, bearing two transverse depressions. Elytra densely covered with large deep depressions, the suture slightly carinate, the second and fifth interstices strongly carinate. One specimen.

I have named this charming little insect after Mr. H. C. Fall, who has made the best study of these forms. *C. falliana* is very distinct from *C. filum*, but it is not necessary to separate it as a genus at present. The under surface is impunctate, but very deeply grooved; the peculiar circular elevation of the metasternum of *C. filum* is not present, neither are the peculiar plicæ of the first ventral plate.

ADISTEMIA.

Adistemia, Fall, Trans. Am. Ent. Soc. 1899, p. 141.

Lathridius watsoni, Woll., has been recently separated, with good reason, by Fall from *Cartodere*. It is the only known species of his genus *Adistemia*.

1. **Adistemia watsoni.** (Tab. XIX. fig. 5.)

Lathridius watsoni, Wollaston, Trans. Ent. Soc. Lond. 1871, p. 253 [1].
Cartodere watsoni, Belon, Ann. Soc. Linn. Lyon, xlvi. 1899, p. 176 [2].
Adistemia watsoni, Fall, Trans. Am. Ent. Soc. 1899, p. 141 [3].

Hab. North America [2].—Mexico [2], in houses in the City of Mexico (*Flohr*).—South America [1 2].—Europe [2]; Madeira [1].

A specimen sent to me, and another to the editors of this work, by the late Julius Flohr, are all I have seen of this elegant species. It was found in houses in the City of Mexico.

BELONIA.

Belonia, Fall, Trans. Am. Ent. Soc. 1899, p. 142.

This recently instituted genus includes only one species, so far as we know at present.

1. **Belonia unicostata.** (Tab. XIX. fig. 6.)

Cartodere unicostata, Belon, Rev. Ent. Fr. 1887, p. 225 [1].
Belonia unicostata, Fall, Trans. Am. Ent. Soc. 1899, p. 142 [2].

Hab. North America, Florida [2].—Mexico, Cordova [1] (*Sallé*), Teapa [1].

Subfam. *CORTICARIINÆ.*

CORTICARIA.

Corticaria, Marsham, Ent. Brit. i. p. 106 (1802).

Corticaria, even after the separation of *Melanophthalma*, is an extensive and widely distributed genus, though as yet only one species has been found in our region.

1. **Corticaria humilis,** sp. n. (Tab. XIX. fig. 7.)

Parallela, subdepressa, fulva, subtiliter punctata et pubescens; prothorace pone medium vage foveolato, dense punctato; elytris punctis seriatis tantum ad basin prope suturam distinctis.
Long. $1\frac{3}{5}$ millim.

Hab. Guatemala, Capetillo (*Champion*).

Antennæ short; club 3-jointed, very abrupt, not darker in colour than the rest of

the antenna. Head short, finely punctate; eyes close to the thorax. Thorax strongly transverse, a little narrower than the elytra, finely and closely punctured, with a rather indistinct and not broad impression behind the middle, the hind angles minutely spinose. Elytra very finely punctate; near the suture at the base three or four series of punctures may be distinguished, but elsewhere the punctuation is not seriate; the pubescence is very fine and short; there is a sutural depression. The legs are short, the hind pair rather thick, all the tarsi short.

We have only one mutilated example of this insect, and it appears to be a male. There is no fovea on the last abdominal segment. The species may be placed in Group 6 of Belon's revision (Revue d'Entomologie, 1897, p. 143).

MELANOPHTHALMA.

Melanophthalma, Motschulsky, Bull. Soc. Mosc. iii. p. 269 (1866).

This very widely distributed genus includes nearly 100 species. Though the characters by which it is distinguished from *Corticaria* are, as pointed out by Ganglbauer, far from satisfactory, it is at present convenient to adopt it. *Cortilena*, treated by Fall as distinct, I have adopted as a subgenus.

§ 1. Club of antenna 3-jointed; first segment of abdomen with two raised lines behind the coxæ. (Subgen. CORTICARINA.)

1. **Melanophthalma centralis,** sp. n. (Tab. XIX. fig. 8.)

Ovalis, testacea; oculis magnis, prothorace angusto, ante basin sulca transversa integra profunda, fortiter dense punctato; elytris subtiliter seriatim punctatis, breviter setosis.

Long. $1\frac{1}{4}$–$1\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*), Jalapa (*Höge*), Atoyac, Teapa (*H. H. Smith*), Orizaba (*H. H. Smith & Flohr*), Mexico city, Motzorongo (*Flohr*); GUATEMALA, near the city, Aceituno, Capetillo (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet, Peña Blanca, Tolé, Bugaba (*Champion*).

This insect is extremely similar to the well-known *M. gibbosa*, but belongs to a different subgenus (*Melanophthalma* i. sp.), the first abdominal segment possessing well-marked, raised, coxal lines. Superficially, it may always be distinguished from *M. gibbosa* by the larger and more coarsely facetted eyes, which are less widely separated, and by the deeper depression on the thorax, though this latter character varies a good deal in both species. The antennæ are slender, the club 3-jointed, slender, and not very abrupt, the ninth joint a little longer than broad, the tenth about as long as broad. The thorax is much narrower than the elytra, but is rather broader than long. The punctures of the elytra are very regularly placed, but each one is ill-defined; the serial hairs are quite short. The legs are yellow.

We have received upwards of thirty specimens that I refer to this species, but, unfortunately, very few are in a good state of preservation. It varies a good deal in colour, like *M. gibbosa*. The pair from Aceituno, Guatemala, that I have taken as the types, have the club of the antennæ yellow, but in other specimens it is infuscate. The colour of the elytra varies also a good deal, and the suture is sometimes narrowly black.

2. **Melanophthalma duplicata,** sp. n.

Brevis, parum convexa, læte rufa; antennis pedibusque flavis, illis brevibus, clava abrupte triarticulata; prothorace fortiter transverso, parce punctato, linea mox ante basin elevata, ante quam impressione parum profunda; elytris subtiliter punctatis et setosis.

Long. $1\frac{1}{4}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*); NICARAGUA, Chontales (*Janson*).

This insect is closely allied to *M. centralis*, but is smaller than the smallest individuals of that species, and is distinguished by the shorter antennæ and more transverse thorax, this latter being elevated behind the transverse depression so as to appear to be traversed by a raised line just in front of the actual base. The colour is remarkably vivid for this genus. Four specimens.

§ 2. Club of antenna 3-jointed; abdomen destitute of lines behind the hind coxæ. (Subgen. MELANOPHTHALMA i. sp.)

3. **Melanophthalma subfusca,** sp. n.

Ovalis, convexa, rufo-fusca; antennis pedibusque testaceis, illarum clava triarticulata, obscura; capite parvo, oculis parvis, prominulis; thorace fortiter transverso, pone medium foveolato, subtiliter punctato; elytris subtiliter punctatis et setosis.

Long. $1\frac{1}{3}$–$1\frac{1}{2}$ millim.

Hab. MEXICO, Cordova (*Sallé*), Zacualtipan, Jalapa (*Höge*); GUATEMALA, near the city, Aceituno, Dueñas, Zapote, San Gerónimo, Senahu, San Juan (*Champion*); PANAMA, Volcan de Chiriqui 4000 to 6000 feet (*Champion*).

Similar to the European *M. fuscula*, but smaller, especially shorter and with a more transverse thorax. Club of the antenna slender. Head small, very much narrower than the thorax, finely punctate, the small eyes very prominent. Thorax short, much rounded at the sides, the hind angles prominent and therefore quite acute; finely punctate, with a rather large fovea behind the middle. Elytra short, convex, the serial punctuation and setosity very fine, but definite. Basal joint of front tarsus very slightly dilated. Coxal lines entirely absent.

This appears to be a very variable species, but it is possible that one or two individuals that I have assigned to it may not really belong here.

§ 3. Club of antenna 2-jointed; first segment of abdomen with raised lines. (Subgen. CORTILENA.)

4. **Melanophthalma remota,** sp. n.

Angusta, parum convexa, testacea, elytrorum sutura fuscescente; parce punctata, subtiliterque setulosa; antennis clava biarticulata, articulo nono quam articulo octavo paulo majore.
Long. $1\frac{3}{5}$ millim.

Hab. GUATEMALA, Capetillo (*Champion*).

Distinguished from all the varieties of *M. centralis* by the more depressed and parallel form, as well as by the smaller ninth joint of the antennæ, and the short lines on the first abdominal segment, which, although present, are very much abbreviated. Antennæ slender. Eyes only moderately large. Head coarsely, rather sparingly punctured. Thorax transverse, but a good deal narrower than the elytra, rather coarsely, not densely punctured, very indistinctly transversely depressed in front of the base; hind angles only very minutely prominent. Elytra rather long and narrow; punctuation very much obliterated, the setosity very short and fine. Legs slender, the tarsi long and slender. One specimen of doubtful sex. The basal joint of the front tarsus is not in the least dilated.

5. **Melanophthalma inornata,** sp. n.

Parum convexa, oblongo-ovalis, testacea, absque pubescentia, parce punctata; antennis clava biarticulata.
Long. $1\frac{1}{2}$ millim.

Hab. MEXICO, Teapa (*H. H. Smith*); GUATEMALA, near the city, Zapote, Champerico (*Champion*); NICARAGUA, Chontales (*Janson*).

Ninth joint of antenna only very slightly larger than the eighth, much smaller than the tenth, which is transverse. Head much narrower than the thorax, rather sparingly punctured. Thorax strongly transverse, though much narrower than the elytra, sparingly punctured, without definite impressions; hind angles not spinose. Elytra with distinct series of punctures, these, however, becoming obsolete at the tip.

We have received only eight specimens of this species; it varies much in punctuation, but may be distinguished from all others by the pallid colour and the absence of setosity. Structurally, *M. inornata* appears to be closely allied to *M. placida*. In both these species the lines on the first abdominal segment do not extend to the hind margin.

6. **Melanophthalma placida,** sp. n.

Parum convexa, angustissime ovalis, capite thoraceque læte rufis, elytris corporeque posterius nigris, antennis pedibusque flavis; antennis clava biarticulata, fuscescente.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Senahu in Vera Paz (*Champion*).

In this species the punctuation is extremely fine and the setosity so minute that the insect appears to be bare. The antennæ are very slender, 11-jointed, the ninth joint but little larger than the eighth, the tenth slightly transverse. Head excessively finely punctate; eyes moderately large, very widely separated; the latter separated from the neck by a well-marked interval. Thorax strongly transverse, not much rounded at the sides, which are finely crenate; hind angles rectangular, sharply marked; punctuation very minute. Punctuation and setosity of the elytra extremely minute. Legs very slender. First abdominal segment with well-marked coxal lines. Two specimens.

Fam. MYCETOPHAGIDÆ *.

This is one of the smaller families of Coleoptera, as most of the genera referred to it in the Munich Catalogue have since been shown to belong elsewhere. *Mycetophagus*, *Triphyllus*, *Litargus*, and *Typhœa* are the only genera that can be accepted as valid and as certainly belonging to the family. The Mycetophagidæ are very fragile insects and are but little collected. Two genera allied to *Litargus* from our region are not included in the above-mentioned Catalogue; one of them has already been distinguished by Casey from North-American material.

TRIPHYLLUS.

Triphyllus, Latreille, Règn. Anim. 2nd ed. v. p. 98 (1829).

This is a widely distributed genus, though it does not include many species. Although Leconte in his Synopsis of the Mycetophagidæ of North America does not mention any species of *Triphyllus*, the genus is now well known as occurring there. *Mycetophagus*, which is well represented in the North-American fauna, has not yet been found in our region.

1. **Triphyllus perfectus,** sp. n. (Tab. XIX. fig. 9.)

Ferrugineus, antennarum clava, thorace elytrisque ex parte nigricantibus, his maculis numerosis testaceis. Long. 3–4¼ millim.

Hab. Mexico, Cuernavaca 7000 feet (*Flohr*); Guatemala (*Sallé*), Volcan de Fuego 6400 feet (*Salvin*), San Gerónimo, Capetillo (*Champion*).

Antennæ red, with the club black, the last joint red at the extremity. Thorax strongly transverse, densely, somewhat finely rugose; finely margined at the sides, not serrate, a small fovea in front of the base on each side of the middle. Elytra very finely punctate, blackish, with numerous yellow spots irregularly placed, most extensive about the base.

* By D. Sharp.

LITARGUS.

Litargus, Erichson, Naturg. Ins. Deutschl. iii. p. 415 (1856); Leconte, Proc. Acad. Phil. 1856, p. 12.

Litargus is probably the most numerous in species of any of the genera of Mycetophagidæ, and is very widely distributed. About twenty representatives are known.

1. Litargus balteatus.

Litargus balteatus, Leconte, Proc. Acad. Phil. 1856, p. 14[1].

Hab. North America, Colorado River near the junction of the Gila[1].—Mexico, N. Sonora (*Morrison*), Cordova (*Sallé*, *Höge*), Mexico city, Jalapa (*Höge*), Guanajuato, Toxpam (*Sallé*); Guatemala, near the city, Zapote (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui 2000 to 4000 feet (*Champion*).

Var. *disjunctus*, var. n. Supra niger, elytris maculis sex disjunctis testaceis.

Hab. Mexico, Toxpam, Cordova (*Sallé*), Teapa (*H. H. Smith*); British Honduras, Belize (*Blancaneaux*); Guatemala, Zapote, Cerro Zunil (*Champion*).

The type-form, as described by Leconte, has a very large pallid mark contiguous to the scutellum. The yellow marks, however, vary in extent, so that I have treated a form in which there are separated spots as merely a variety. According to an example from the Sallé collection, obtained from Sturm, the type-form is the *Mycetophagus fasciatus* of that entomologist.

2. Litargus mœrens, sp. n.

Subdepressus, anguste ovalis, niger; corpore subtus, antennis pedibusque ferrugineis, antennarum clava plus minusve fuscescente; elytro singulo pone medium macula transversa flavescente.

Long. $2\frac{1}{2}$ millim.

Hab. Guatemala, Zapote (*Champion*); Panama, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

The only form in which the elytra are dark with a single rufescent mark on each. It is rather narrow in shape, but a good deal rounded at the sides; the surface is covered with a fine yellow-grey pubescence, and the punctuation is very fine; the impressed line on each side of the thorax is rather long and distinct; the outer margin of the elytra and the base of the thorax are narrowly and obscurely yellow; the two rufescent marks on the elytra do not quite meet and do not extend to the side. The hind tarsi are long and very slender. Four specimens.

TILARGUS.

Litargus, subgen. *Tilargus*, Casey, Journ. New York Ent. Soc. viii. p. 135 (1900).

Corpus breviter ovale, superne convexum; palpis maxillaribus apicem versus evidenter incrassatis.

Although closely allied to *Litargus*, this seems to be a natural genus, the shorter

and broader form being accompanied by a difference in the palpi. The insects are much less fragile than are the species of *Litargus*. The club of the antennæ is 3-jointed, the joints being much shorter than in *Litargus*. The front coxæ are very slightly distant. The first ventral plate behind the hind coxæ is only about as long as the second segment. I have not seen any species that can be referred to this genus except those four described below.

I think these undoubtedly belong to the subgenus *Tilargus* of Casey. Although he gives no characters apart from those of the species, yet as I include *L. tetraspilotus* it is clear that the name he proposes had better be adopted.

1. **Tilargus tetraspilotus.** (Tab. XIX. fig. 10.)

Litargus tetraspilotus, Leconte, Proc. Acad. Phil. 1856, p. 14[1].

Breviter ovalis, sat convexus, subnitidus, minus dense pubescens, niger; antennis pedibusque rufo-testaceis, his clava nigricante; elytris guttis quatuor transversis testaceis.
Long. 2 millim.

Hab. North America, Southern and Western States[1].—Mexico, Jalapa, Tapachula (*Höge*), Cordova (*Höge*, *Sallé*), Motzorongo (*Flohr*), Orizaba (*H. H. Smith*); Guatemala, near the city, Zapote, Capetillo, Dueñas (*Champion*); Nicaragua, Chontales (*Janson*); Panama, Volcan de Chiriqui (*Champion*).

Antennæ short, first two joints of the club transverse, eleventh joint about as long as broad. Thorax very short, much narrowed in front, very slightly notched or impressed on the base each side of the scutellum; a little red at the hind angles and side, finely granulate. Elytra black, with four subequal, large, transversely oval marks, placed two in front of the middle, two behind the middle; feebly and not densely punctate and pubescent, the pubescence exhibiting a somewhat seriate appearance.

This is a common insect in Central America and does not vary very much.

2. **Tilargus debilis,** sp. n.

Breviter ovalis, subtiliter pubescens, subnitidus, testaceus; prothoracis disco, pectore, abdomine pedorumque basi fuscescentibus; elytris irregulariter nigro-maculatis.
Long. 2 millim.

Hab. Mexico, near the city (*Höge*, *H. H. Smith*), Toxpam (*Sallé*), Omilteme, Chilpancingo (*H. H. Smith*); Guatemala, Dueñas, Capetillo, San Gerónimo (*Champion*).

Readily distinguished by the colour from *T. tetraspilotus*. Eyes rather small. Thorax very short, much narrowed in front, finely punctate; lateral margins of the thorax and elytra very fine; elytra finely punctate, a little shining, the pubescence not seriate, the black spots very variable, but never entirely absent. Fifteen examples.

This insect is variable as regards colour. The specimen from Toxpam is immature and perhaps belongs to another species, the marks on the elytra forming a definite pattern as in *Litargus*.

3. **Tilargus granulatus,** sp. n.

Breviter ovalis, sat convexus, testaceus; pectore, abdomine, prothoracis disco elytrorumque maculis magnis fuscescentibus; fere opacus, prothorace granulato-punctato.
Long. $2\frac{1}{2}$, lat. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, Calderas (*Champion*).

Though this insect bears a general resemblance to *T. debilis*, it is readily distinguished therefrom by the peculiar, almost granulated sculpture of the pronotum, the surface of which is very dull; the pubescence is very fine and dense. The elytra are more distinctly punctured than usual, and the pubescence does not appear to be seriate; the dark marks are but little pigmented, there being two on the suture, a large one on the disc of each, and one or two others even more indefinite. One specimen.

4. **Tilargus complicatus,** sp. n. (Tab. XIX. fig. 11.)

Ovalis, convexus, niger, pube flavescente vestitus; antennis, palpis, pedibus elytrisque testaceis, his maculis irregularibus nigris; corpore subtus anterius ferrugineo.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Bugaba (*Champion*).

This is a remarkable species, with a very definite complex set of black marks on the elytra, forming extremely irregular fasciæ—a pattern that is not easy to describe, but will be readily recognized from the figure. The antennæ are yellow, with stout club. Thorax very short, greatly narrowed in front, blackish, yellow towards the lateral margin; sculpture extremely fine and indistinct, but the pale pubescence very evident; the basal notch on each side of the scutellum very distinct. Elytra very indistinctly punctate, but with a distinct pubescence which has some appearance of seriate arrangement arising from depressed setæ. Two specimens.

This species has the thick palpi of *Tilargus*, but in general appearance is more like a *Litargus*. It will probably form a distinct genus, but the two specimens are very fragile and scarcely fit for description.

CATOPIUS, gen. nov.

Tibiæ omnes ad apicem calcaribus elongatis et setis rigidis armatæ.

With a general resemblance to *Litargus* that makes the relation of the two certain, this genus is nevertheless distinguished by other characters than those drawn from the remarkable structure of the tibial spurs. The antennæ are slender, with a long slender club. The eyes are prominent. The prosternum is elongate, with a free acuminate process. The front coxæ are larger than in *Litargus*, and the first ventral segment behind the coxa is not much longer than the second. The basal joint on all the

tarsi is excessively long, on the hind legs nearly as long as the other three joints together.

1. **Catopius irregularis,** sp. n. (Tab. XIX. figg. 12; 12 *a*, apex of front tibia and base of tarsus.)

Ovalis, postice angustatus, ferrugineus, supra picescens, pube irregulariter posita quasi maculatus.
Long. 3 millim.

Hab. MEXICO, Motzorongo (*Flohr*); GUATEMALA, Zapote, El Reposo, Pantaleon (*Champion*).

Head very small in comparison with the thorax. Thorax large, almost straightly truncate in front and behind, but in front much arched; lateral margin excessively fine; the base with a depression on each side close to the scutellum. Elytra greatly narrowed behind, clothed with fine pubescence in a spotty manner, punctuation absent. The front tarsi are only 3-jointed, notwithstanding their being so elongate. Twenty specimens.

TYPHÆA.

Typhæa, Curtis, Brit. Ent. xv. t. 702 (1830).

Owing to its diffusion by commerce this genus is of no special interest.

1. **Typhæa fumata.**

Dermestes fumatus, Linn. Syst. Nat. i. 2, p. 564 [1].
Typhæa fumata, Curtis, Brit. Ent. t. 702 [2]; Leconte, Proc. Acad. Phil. 1856, p. 15 [3].

Hab. NORTH AMERICA [3].—MEXICO, Toxpam, Cordova (*Sallé*); GUATEMALA, near the city, Zapote, Capetillo (*Champion*).—EUROPE [1 2].

This species is frequently met with in old straw and hay, and is liable to be diffused by commerce.

Fam. DERMESTIDÆ *.

Between three and four hundred species of Dermestidæ are at present known. One of the best known of the genera of this family—*Anthrenus*—is apparently absent from our region: there is, however, a single specimen belonging to it, labelled N. Sonora, in our collections; but as the species are extremely liable to be carried about with natural history specimens, it is probable that this individual does not really belong to our Fauna.

* By D. SHARP.

Subfam. *DERMESTINÆ.*

DERMESTES.

Dermestes, Linn. (ex parte), Syst. Nat. i. 2, p. 561 (1767); Erichson, Ins. Deutschl. iii. p. 424.

This genus includes upwards of fifty species, but how many of these are really valid it is impossible to say, the synonymy being very difficult on account of most of the descriptions being inadequate. Some of the species are extremely variable. Five have been detected in our region.

1. Dermestes marmoratus.

Dermestes marmoratus, Say, Journ. Acad. Phil. iii. p. 197 [1]; Jayne, Proc. Am. Phil. Soc. xx. p. 349, t. 1. fig. 10 (1882) [2].

Hab. North America [1], Western and Pacific States [2].—Mexico, Villa Lerdo in Durango (*Höge*).

This North-American insect is represented as Mexican by a series of seventeen specimens. It is a very distinct species, larger than any other, and with the sides of the thorax much converging in front, but straight behind the middle.

2. Dermestes mannerheimi.

Dermestes mannerheimii, Lec. Proc. Acad. Phil. 1854, p. 107 [1].

Hab. North America, California [1], Texas (*coll. Sharp*).—Mexico, Villa Lerdo in Durango, Vera Cruz, Cordova (*Höge*), Santecomapan (*Sallé*).

The specimen from Santecomapan agrees almost exactly with one of the individuals from California named for me many years ago by Dr. Leconte as *D. mannerheimi*. Jayne says the species is not distinct from *D. marmoratus*, but this is apparently an error. Reitter, on the other hand, says that *D. mannerheimi* is probably ("sicher") *D. caninus*, Germar. That species is said by Jayne to be *D. murinus*, L.; but this also may be assumed to be an error arising from badly-named examples, as our common European *D. murinus* does not agree with Jayne's description. We have received only a small series of six specimens of this insect.

D. mannerheimi may be distinguished from all our species (except *D. marmoratus*) by the thorax being mottled with numerous spots of black, fulvous-yellow, and grey.

3. Dermestes carnivorus.

Dermestes carnivorus, Fabr. Syst. Ent. i. p. 55 [1]; Reitter, Verh. Ver. Brünn, xix. p. 29 (1881) [2].
? *Dermestes sobrinus* (Lec.), Reitter, l. c. [3].

Hab. North America, Arizona.—Mexico, Ventanas to Jalapa (*Forrer*, *Höge*, *&c.*), Yucatan; British Honduras; Guatemala, San Gerónimo, Volcan de Atitlan (*Champion*); Nicaragua; Costa Rica.

The species of *Dermestes* are carried about to a large extent by commerce, and the localities in which specimens are found are of little interest; but it is remarkable that we have not received *D. carnivorus* from Panama, though the insect is very abundant in Mexico.

According to the very large series before me this is an extremely variable species. The most highly-coloured forms have the pubescence on the sides and front of the thorax white, in sharp contrast to the large triangular patch of black pubescence on the disc; and the elytra more or less broadly red at the base. As another extreme form, we may mention one in which the upper surface is black, covered with uniform grey pubescence. Between the two extremes we have numerous varieties, and it is probable that some of these have been described as distinct species. The synonymy of these forms of *Dermestes* is so questionable a matter that it cannot be dealt with here; but reference may be made to Reitter's remarks [2], which were apparently unknown to Jayne when he published his paper on North-American Dermestidæ. Reitter [3] records *D. sobrinus* as occurring in Mexico, and I think it possible he may refer to one of the varieties of this protean insect. He relies on the colour of the sides of the metasternum to distinguish *D. sobrinus*. But the colour of the under surface is very variable in some of the forms of *D. carnivorus*. The specimens described by Fabricius were reputed to have been captured in Australia and New Zealand.

4. **Dermestes vulpinus.**

Dermestes vulpinus, Fabr. Spec. Ins. i. p. 64 [1]; Erichson, Ins. Deutschl. iii. p. 426 [2].

Hab. Fere ubique.

This species has been widely distributed by commerce, and is sometimes found in extraordinary profusion in cargoes of bones. It is common in our region, where it varies greatly. A variety with uniformly distributed grey pubescence is the *Dermestes canus* of Sturm, according to a specimen from his cabinet in Sallé's collection. This variety resembles almost exactly the unicolorous form of *D. carnivorus* alluded to above, so that the two were mixed together by Sallé under the name of *D. canus*. *D. vulpinus* may be distinguished from all our other species by the minute spines at the apex of the elytral suture, and by the male having only one pencil of pubescence on the ventral plates.

5. **Dermestes cadaverinus.**

Dermestes cadaverinus, Fabr. Syst. Ent. p. 55 [1]; Erichson, Ins. Deutschl. iii. p. 430 [2]; Jayne, Proc. Am. Phil. Soc. xx. p. 353 (1882) [3].

Hab. NORTH AMERICA, Florida [3].—MEXICO [2], Puebla (*Sallé*), Morelia, Vera Cruz (*Höge*); BRITISH HONDURAS, Rio Hondo (*Blancaneaux*).—SIBERIA (*coll. Sharp*).

This is easily distinguished from the other species here enumerated by the more

elongate and flattened form, very dark colour, and by there being a depression on the base of the thorax on each side. I am unable to distinguish East-Siberian individuals from our small Mexican series, and Erichson [2] has stated that *D. domesticus*, Gebl., from Siberia, is the same as *D. cadaverinus*.

6. Dermestes peruvianus.

Dermestes peruvianus, Cast. Hist. Nat. ii. p. 33 [1]; Erichson, Ins. Deutschl. iii. p. 427 [2].

Hab. Mexico [2].—South America [1 2].

We have not received any example of this species.

Subfam. *ATTAGENINÆ*.

ATTAGENUS.

Attagenus, Latreille, Gen. Crust. et Ins. ii. p. 32 (1807).
Novelsis et *Attagenus*, Casey, Journ. New York Ent. Soc. viii. pp. 146, 148 (1900).

This is one of the more extensive of the genera of Dermestidæ, and is numerous in species in the Eastern Hemisphere. It includes the more imperfect forms of the subfamily, and there is considerable variety in minor points of structure. I have not thought it necessary to adopt Casey's division of the North-American forms at present, as the material available does not enable me to verify his characters.

1. Attagenus piceus.

Dermestes piceus, Oliv. Ent. ii. 9, p. 10, t. 1. fig. 4 [1].
Attagenus piceus, Jayne, Proc. Am. Phil. Soc. xx. p. 355, t. 1. figg. 22, 23, 26 [2].
Attagenus cylindricus, Kirby, Faun. Bor.-Amer. iv. p. 113, t. 7. fig. 3 [3].

Hab. North America [2 3].—Mexico (*Sallé*, *Höge*).—Europe [1].

I refer three female specimens to this species, which is apparently a common insect in N. America.

2. Attagenus horni.

Attagenus hornii, Jayne, Proc. Am. Phil. Soc. xx. p. 356, t. 1. figg. 18, 19, 24, 25 [1].
Novelsis horni, Casey, Journ. New York Ent. Soc. viii. p. 148 [2].

Hab. North America, Pacific States [1], Arizona [2].—Mexico, Mexico city (*Flohr*), Frontera in Tabasco (*Höge*).

Three specimens, considered by Dr. Horn to be probably this species. Jayne's description is marred by an error that renders it nugatory. If, however, in his second description of the elytra, we read "black" instead of "rufous," this would bring it into accord with his immediately preceding statement, and would apply to our insect. According to Casey, the antennæ are only 10-jointed in the male.

GENATTUS, gen. nov.

Antennæ 11-articulatæ, articulis 5–8 brevissimis; clava triarticulata, maris elongata laxe articulata. Palpi maxillares articulo ultimo fere magno, apice truncato. Mentum grande. Prosternum in medio horizontale, anterius ad capitis receptionem adaptatum.

This genus has the facies of the *A. verbasci*-section of *Attagenus* (=*Megatoma*, Reitter &c.), but is abundantly distinct therefrom, the prosternum and mesosternum being brought into contiguity and co-adapted in a much more perfect manner. The prothorax is without any antennal fossæ. The prosternum has the anterior margin a little pendent, and inside forms a polished oblique plate or chin-piece, against which the head is retracted; when retracted the mandibles and a part of the mentum still project. The middle coxæ are moderately separated, with a broad, deep, and perfect horizontal groove for the reception of the small prosternal process. The club of the male antenna is remarkable for the loose articulation of the joints, in this respect much resembling the Dorcatominæ-division of Anobiidæ.

1. **Genattus æqualis,** sp. n. (Tab. XIX. figg. 13, ♂; 13 *a*, ♂ antenna; 13 *b*, ♀ antenna.)

Ovalis, sat convexus, pube subdepressa conspicua vestitus, niger, pedibus rufis; antennis testaceis, clava maris nigricante; elytris versus basin plus minusve rufescentibus, fasciis tribus irregularibus et interruptis albidis.

Long. 3–4 millim.

Hab. Mexico, Cordova (*Sallé*).

In this insect the pubescence of the upper surface is more developed than in the allied forms. The antennæ have the first joint a good deal longer than the second, which is almost spherical; joints 3–5 are very small; the second joint of the elongate male club is triangular, having only a very slender articulation with the joint before it and also with the terminal joint, this latter being nearly twice as long as the tenth. The thorax is rather coarsely punctate, but the punctuation is obscured by the pubescence, which is mostly pallid except across the middle, where it is chiefly black. The scutellum and a space on each side of it bear pallid hairs. The elytra have behind the scutellum a slender looped and angulate fascia of white hairs, and behind the middle a rather irregular band of spots, and before the tip there is another band. The amount of red varies, and the ground-colour of the elytra may be almost entirely black. The legs are moderately stout, the tibiæ with short stout setæ externally.

TROGODERMA.

Trogoderma, Latreille, Règne Anim. éd. 2, iv. p. 511 (1829); Casey, Journ. New York Ent. Soc. viii. p. 151.

This is a widely-distributed genus, but is a composite one as at present understood.

1. **Trogoderma filipes,** sp. n.

Oblongo-ovale, parum convexum, nigrum, griseo-vestitum; elytris fasciis duabus, transversis, irregularibus, sat conspicuis albidis.
Long. 3 millim.

Hab. Mexico, Guanajuato, Puebla (*Sallé*); Central America (*coll. Sharp*).

I have seen only the male of this species, which is evidently allied to the North-American *T. sternale*, Jayne. Antennæ black, except the small second and third joints, which are obscurely yellow; third joint extremely minute; joints 5–10 transverse, the eleventh acuminate, twice as long as the tenth. Eyes round, convex. Thorax strongly transverse, but little convex, the sides appearing somewhat flattened out, black, very finely punctate, with much white pubescence at the sides. Elytra very finely punctate, clothed with fine dark hair, with a very ill-defined broad marking of scanty white pubescence somewhat in front of the middle, and a narrower and even more obscure one before the apex.

I have long had a specimen of this species in my collection, and there are four others obtained from the late M. Sallé's Mexican collection.

2. **Trogoderma celatum,** sp. n. (Tab. XIX. fig. 14, ♀ antenna.)

Oblongo-ovale, sat convexum, pube variegata dense vestitum, nigrum; elytris ex parte parum discrete rufo-coloratis, signaturis albo-pubescentibus discoidalem aream quasi rhomboidalem includentibus.
Long. 3–4 millim.

Hab. Mexico, Guanajuato (*Sallé*).

Similar to *T. filipes*, but with the lateral parts of the thorax not spread out, and the antennæ of the male much shorter. The surface is very finely punctate, and bears much variegate pubescence—white, pale tawny, and black; the white marks do not form spots, but two angulate bands in front of the middle touch at a point on each side of the suture, so as to enclose a small space of dark colour, somewhat rhomboidal in form. The thorax is covered with pubescence, variegate all across, so that only a comparatively small space in front of the scutellum remains black. The elytra are stained with red (independent of pubescence) to a variable extent. The legs are obscure red. The male antennæ are short and very broad; the third and fourth joints minute, fifth also very small, but slightly larger than the fourth (these three joints are not very definitely separated); sixth strongly transverse; seventh to eleventh forming a long broad club of very short joints, the eleventh not being elongate, though nearly as long as the two preceding together.

Described from four specimens in a very bad state of preservation, so that I have taken the description of the colour from the female; but I believe all are really one species. It is apparently allied to *T. simulaus*, Casey. The eyes are round and prominent.

3. **Trogoderma gravidum,** sp. n.

Ovale, convexum, nigrum, fusco-pubescens, minus variegatum; elytris fasciis duabus tenuibus albido-pubescentibus; antennis medio testaceo; pedibus rufo-obscuris.

Long. ♀ 5 millim.

Hab. Mexico, Guanajuato, Puebla (*Sallé*).

We have only the female sex of this insect. The individuals are larger than those of any other *Trogoderma* known to me, and have the upper surface less variegate, there being no trace of red colour on the elytra, and only two, not very conspicuous, white bands on the elytra. The eyes are not emarginate. Joints 3–6 of the antennæ small, but not minute; seventh joint transverse, but small; joints 8–11 forming a short club, darker in colour than the preceding joints. The thorax is strongly transverse, very convex, the sides not being at all directed outwards, much narrowed in front, the pubescence at the sides white, and also of this colour at the base, except in the middle. Elytra with a median arcuate band of scanty white hairs, also with a few white hairs between this and the base, and a rather more distinct band before the apex; the clothing is chiefly of a tawny colour. The legs are red, but infuscate, the femora being nearly black. Four specimens.

4. **Trogoderma mexicanum.**

Trogoderma mexicanum, Reitter, Verh. Ver. Brünn, xix. p. 39 (1881) [1].

Hab. Mexico [1].

I have not seen any specimen corresponding to the description of this species, which is stated to have red antennæ.

EUCNOCERUS, gen. nov.

Antennæ 11-articulatæ, maris serratæ, feminæ clavatæ; clava 4- vel 5-articulata.

This curious genus is readily distinguished by the Serricorn antennæ of the male, and by the unusually large number of joints in the club of the female. The prothorax is deeply depressed along each side of the under surface for its whole length for the reception of the antennæ, but the groove in its posterior part is much less definite in the female than it is in the male. The prosternum is quite horizontal along the middle, with the front margin a little pendent, and the retracted head is closely applied to it, leaving only the mandibles free. The middle legs are rather widely separated, and the mesosternum bears a deep and definite horizontal groove for the reception of the prosternal process. The legs are very slender, the tibiæ unarmed externally.

The genus is allied to *Trogoderma*, from which it is distinguished by the form of the male antennæ, the articulations of which are placed on one side, as in the Serricorn Coleoptera, not in the middle as in the Clavicornia. The N.-American *Trogoderma tarsalis* and *T. serriger* probably belong to *Eucnocerus*. Although *Trogoderma* has long been recognized as a composite genus, *Eucnocerus* seems to be separable from all its

species, and must be considered as a very highly organized form. Not only the antennæ, but also the trophi, appear to be very different in the two sexes. In the female the maxillary palpi are short and very thick, the terminal joint being stouter than the preceding.

1. **Eucnocerus dispar,** sp. n. (Tab. XIX. figg. 15, ♂; 15 *a*, ♂ antenna; 15 *b*, ♀ antenna.)

Oblongo-ovalis, sat convexus, niger, supra rufo-maculatus, pube variegata vestitus; antennis pedibusque testaceis, femoribus piceis.

Long. 3–4¼ millim.

Hab. MEXICO, Temax in North Yucatan (*Gaumer*).

This is the most remarkable species of the genus, so far as the structure of the antennæ is concerned. It may be distinguished from the others by the fact that though there are white hairs on the upper surface, they are not anywhere concentrated into spots or bands. The form is extremely compact. The thorax is very short, strongly convex transversely, black, excessively finely punctate, clothed with an extremely fine tomentum, which, though chiefly black, is variegated with white and tawny hairs. Elytra black, much marked with red, minutely punctate, clothed with a very fine down, which is variegate so as to add to the mottled appearance without forming either spots or bands. Legs very slender.

We have a series of about twenty specimens. The female is usually larger than the male.

2. **Eucnocerus anthrenoides,** sp. n.

Ovalis, convexus, niger, supra pube variegata vestitus; elytris basin versus rufescentibus guttisque albidis ornatis; antennis pedibusque testaceis.

Long. 3–4 millim.

Hab. MEXICO, Playa Vicente (*Sallé*); PANAMA, Bugaba (*Champion*).

This is a more oval and convex insect than *E. dispar*, and has well-marked white spots on the apical portion of the elytra. We have received a male from Bugaba, while the Mexican individual is a female. A third specimen, from Chontales, Nicaragua, is probably a rubbed and denuded example of this species.

CACCOLEPTUS, gen. nov.

Corpus rotundum, setosum. Antennæ 11-articulatæ, subclavatæ; clava 5-articulata. Prothorax utrinque ad antennarum receptionem profunde depressum. Mesosternum ante coxas brevissimum.

The extremely short mesosternum at once distinguishes this genus from *Trogoderma*, and the very broad rounded form will readily lead to its recognition. The clothing is more like hairs than the setæ of *Trogoderma*, and this and the form somewhat suggest an affinity with *Trinodes*. The head when retracted is closely applied to the pro-

sternum, which is very short and has a short, broad, prosternal process. The middle coxæ are widely separated, and the metasternum is defined in front in the middle by a remarkably distinct raised margin, forming a gentle arch: reposing against this the mesosternum appears as a small transverse piece on each side. The ventral segments are smaller than usual. The coxal plates are highly developed.

This genus is established for *C. rotundus*. The second species I have placed in *Caccoleptus* will no doubt have to be separated when more is known about it.

1. **Caccoleptus rotundus,** sp. n. (Tab. XIX. fig. 16.)

Brevis, rotundatus, convexus, supra nigricans, subtus dilute piceus, antennis pedibusque testaceis; setis subdepressis sat dense vestitus, elytris vix albido-subfasciatis.

Long. $2\frac{3}{4}$, lat. $2\frac{1}{4}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

We have only one specimen of this species, and I am uncertain as to its sex, but it is probably a male. The antennæ are short, rather stout, thicker towards the extremity; first and second joints short and stout, third and fourth quite small: from this onwards the antenna becomes gradually thicker, the tenth joint being strongly transverse; the terminal joint is short, but nearly twice as long as the tenth. The eyes are round, not emarginate. The thorax is very short and broad, and is remarkable on account of the great prolongation of the base in the middle, which covers and conceals the scutellum. There is no distinct punctuation of the upper surface, but there is a well-developed clothing of hair, which is mostly black; there are, however, numerous white hairs, which in a very rudimentary manner form a median fascia.

2. **Caccoleptus anisotomoides,** sp. n.

Rotundato-ovalis, convexus, rufus, capite thoraceque nigricantibus, nitidus, parce subtilissime punctatus, parce setosus, hic inde guttis minutis albidis.

Long. $2\frac{1}{4}$ millim.

Hab. BRITISH HONDURAS, Rio Hondo (*Blancaneaux*).

Antennæ very small, almost gradually thickened from the sixth joint to the tenth. Head small. Thorax much lobed at the base in the middle, nearly covering the scutellum. There is a scanty setosity scattered over the surface, and a few minute spots due to small agglomerations of pure white hairs. Legs slender.

We have only one specimen of this insect, which might almost be described as having the form and hind body of *Cryptorhopalum*, with the head and prothorax of *Trogoderma*. It departs in several points from *C. rotundus*, the middle coxæ being less widely separated and the mesosternal margin fine. It is somewhat uncertain how many joints there are to the antenna: the two short basal joints are definite, and then there are two or three more slender joints, the sixth joint distinct and almost forming part of the loosely-articulated 5-jointed club.

HEMIRHOPALUM, gen. nov.

Antennæ clava biarticulata, laxa. Prothorax subtus utrinque ad antennarum receptionem late et profunde sed minus argute impressus.

This genus must be placed between *Hadrotoma* and *Cryptorhopalum*. It agrees with the latter in most of its characters, but the sides of the thorax beneath have a large impression which is shallow behind instead of a depression that exactly fits the club of the antennæ: this impression in front is broadly open. The ocellus is absent, but its position is indicated by a slight difference of the surface. The antennæ differ from those of *Cryptorhopalum* by having a large, but ordinary, laxly-jointed club of two joints. The form is oblong, the base of the thorax being less produced over the scutellum, and the surface much less pubescent than is usual in *Cryptorhopalum*. The species composing the genus appear to be all of the greatest rarity.

1. **Hemirhopalum clythræforme,** sp. n.

Oblongum, nigerrimum, nitidum, fere glabrum, antennis tarsisque sordide testaceis; subtiliter punctatum.
Long. 4 millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

Antennæ with the first joint of the club rather larger than the second. Thorax strongly transverse, all the angles rounded, the base closely applied to the elytra, the sides very densely punctured, the disc more sparingly punctured and shining. Elytra finely and sparingly punctate. Ventral segments with an extremely dense punctuation. One specimen, probably a female.

2. **Hemirhopalum bicolor,** sp. n.

Oblongum, nigrum, nitidum; elytris læte rufis, parte apicali nigra; antennis testaceis, clava obscura; pedibus piceis, tarsis rufis; subtiliter punctatum.
Long. $4\frac{1}{8}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Very closely allied to *H. clythræforme*, but readily distinguished by the bright red colour of the greater part of the elytra. The two joints of the antennal club are infuscate and just about equal in size. The punctuation on the thorax is fine, dense at the sides, more sparing but definite on the disc, and an excessively minute setosity is present. The elytra are bright orange-red, but broadly black at the tip, and there is also a very limited blackening on each side of the scutellum; they have a very fine, but not scanty, punctuation, and no setosity. One specimen, probably a female, the last ventral plate being deeply transversely depressed.

3. **Hemirhopalum buprestoide,** sp. n. (Tab. XIX. figg. 17; 17 *a*, antenna.)

Oblongum, angustum, nigricans, vix nitidum, subtiliter pubescens, antennis pedibusque testaceis, subtiliter punctatum.
Long. 3 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Only one specimen, of uncertain sex, has been obtained of this very peculiar species. It is in facies somewhat like a Buprestid; it has the head very short and broad, the eyes prominent, and the parts of the mouth are free when the head is retracted. The club of the antenna is large, the two joints about equal in size, the terminal one a little infuscate. The thorax is strongly transverse, not greatly narrowed in front, all the angles obtuse, but the hinder ones only very slightly so; the punctuation along the middle is scanty and fine, at the sides denser; the pubescence is scanty and very fine, but not short. The elytra are long and narrow, dull blackish, with indications of a red tinge extending backwards from the shoulders; the punctuation is extremely shallow, but the punctures are not very small; the pubescence is like that of the thorax. The legs are yellow, but infuscate. The abdominal sculpture is very dense and fine.

4. **Hemirhopalum hadrotomoide,** sp. n. (Tab. XIX. fig. 18.)

Elongatum, angustum, nigricans, elytris plaga magna humerali rufa, antennis pedibusque testaceis, his infuscatis; haud nitidum, obsolete punctatum, tenuiter pubescens.
Long. 4 millim.

Hab. MEXICO, Jalapa (*Höge*).

Of this species we have two female specimens. The antennæ are yellow, the terminal joint fuscescent, not quite so large as the preceding one. The thorax is a good deal narrowed in front, finely punctate and with a scanty pubescence; the median basal lobe is emarginate. The elytra are obsoletely punctate, and the pubescence is scanty and very fine; the red mark is large, but ill-defined. The tarsi are yellow, the femora nearly black. A large shallow impression occupies the greater part of the surface of the last ventral plate. In this species the prothoracic antennal cavity is less sharply defined than in the others.

CRYPTORHOPALUM.

Cryptorhopalum, Guérin, Icon. Règn. Anim., Ins. p. 67 (1838); Erichson, Ins. Deutschl. iii. p. 424, nota.

Twelve species of this genus are enumerated in the Munich Catalogue, all from America. Erichson had, however, long previously stated that twenty-five were known to him. Reitter added about thirty species in 1881, five of them being from the Indo-Australian region; and in 1900 Casey described twelve new North-American forms. I have myself seen no true species of this genus from the Eastern Hemisphere, and

two that I formerly described from Hawaii will have to be removed from it. I here describe thirty-eight species, and have little doubt that there are many others in Central America; indeed we have specimens that probably represent some twenty additional forms which are left undescribed for want of adequate material.

§ 1. Elytra variegate in colour by bands or spots of pubescence.—Species 1–11.

1. **Cryptorhopalum septemsignatum,** sp. n. (Tab. XIX. fig. 19.)

Breviter ovale, subtus valde convexum, nigrum, supra signaturis septem læte flavis, subtus nigrum, abdomine lateribusque pectoris flavo-pubescentibus.
Long. 3 millim.

Hab. British Honduras, Belize (*Blancaneaux*); Guatemala, Cahabon (*Champion*).

This species is recognizable by its surface being definitely variegate with bright yellow marks of pubescence sharply limited from the black pubescence. The sides of the thorax are broadly yellow, and there is a patch of yellow hairs on the basal median lobe. The elytra each bear two yellow spots rather near the suture, one just about the middle and another at the tip; the punctuation is largely developed, and at the base consists of a mixture of large and small punctures, becoming dense and fine towards the apex. The club of the antenna is blackish, its two joints accurately co-adapted, the terminal one not quite so large as the preceding, truncate at the tip. Apparently allied to *C. sexsignatum*, Reitt., from Bolivia, but that insect has three yellow spots, instead of two, on each elytron. This species and the following will doubtless form a genus distinct from our other *Cryptorhopala*, the prosternal process being much broader, and the front of the prothorax so formed that the antennal cavities look more outwards and less downwards.

2. **Cryptorhopalum bisignatum,** sp. n.

Breviter ovale, subtus valde convexum, nigrum, supra signaturis quinque flavis, subtus nigrum, abdomine lateribusque pectoris flavo-pubescentibus.
Long. $2\frac{3}{4}$ millim.

Hab. Panama, Bugaba (*Champion*).

Distinguished from *C. septemsignatum* only by the fact that the yellow pubescence is less bright, and the apical pair of elytral spots quite wanting. One male specimen.

3. **Cryptorhopalum posticatum,** sp. n.

Breviter ovale, convexum, pallide griseo-pubescens; elytris pone medium macula magna communi nigra; tibiis, tarsis antennisque rufis.
Long. $2\frac{7}{8}$ millim.

Hab. Panama, Caldera in Chiriqui 1200 feet (*Champion*).

In this insect the sculpture is concealed by the dense pubescence; this is of very pale, but not white, colour, mixed a little with dark fuscous hairs, and there is a

very vague fuscous band across the thorax. The most remarkable feature is, however, the large, oval (almost circular), black ornament just before the tip of the elytra; this is rendered more conspicuous by the white pubescence in front of it being concentrated so as to form part of a ring. The femora are so densely covered with pubescence that their colour is concealed. The unique example is no doubt a male. The club of the antenna is oval, rather short, and broad, with the terminal joint distinctly smaller than the first.

4. **Cryptorhopalum instabile,** sp. n.

Breviter ovale, convexum, griseo-pubescens, nigrum, supra plus minusve rufescens, fasciis transversis irregularibus ornatum; antennis pedibusque rufis.
Long. 2–2½ millim.

Hab. GUATEMALA, Cerro Zunil, Zapote, San Gerónimo, El Jicaro, Cahabon (*Champion*); NICARAGUA, Chontales (*Janson*); PANAMA, Peña Blanca 3000–4000 feet (*Champion*).

I refer to this species a large number of specimens allied to the North-American *C. balteatum*, but of less oblong form. They differ from *C. germanum* by the club of the antennæ being smaller and red in colour. There is much variation in the colour of the upper surface, which is sometimes almost entirely red, sometimes nearly all black. The paler examples are usually less in size than the dark individuals. The pubescent bands consist of a postbasal and a postmedian, and a small mark at the apex; the surface is very easily abraded in this species, and the bands are therefore sometimes very indefinite. There is much pallid pubescence on the thorax. The punctuation is everywhere fine. The club of the male antenna is broad and rather short, the first of its two joints scarcely so long as broad, distinctly but not a great deal longer than the terminal one.

It is possible I may be mixing more than one species under this name, but I have failed to find any satisfactory means of separating the individuals. *C. instabile* differs from *C. balteatum* by the absence of the two circular spaces on the last ventral segment of the female.

5. **Cryptorhopalum dubium,** sp. n.

Breviter ovale, convexum, nigricans, elytris brunneis, antennis pedibusque rufis; pallide griseo-pubescens, minus discrete fasciatum, elytris dense subtiliter punctatis.
Long. 2–2½ millim.

Hab. MEXICO, Cordova (*Sallé, Höge*); BRITISH HONDURAS, Belize (*Blancaneaux*).

Although closely approached by some of the varieties of *C. instabile*, I think this will prove to be a distinct species. The pubescence is more abundant and more uniformly distributed, so that the fasciæ are less marked, and in consequence of the whole length of the sutural portion being pallidly pubescent the darker marks form spots rather than bands; the postbasal fascia is almost completely obliterated. The

pubescence is also rather paler and finer. The club of the antenna is but little different from that of *C. instabile*, but is apparently a little shorter. Ten specimens.

6. **Cryptorhopalum flammulatum,** sp. n.

Breviter ovale, convexum; capite pectoreque nigricantibus; pronoto, elytris abdomineque brunneis; antennis pedibusque testaceis; griseo-pubescens, elytris fasciis duabus angustis distantibus.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, El Tumbador (*Champion*).

This is another close ally of *C. instabile*. The thorax is abundantly clothed with pale pubescence. The elytra have a postmedian and a postbasal fascia, which extend but little in the longitudinal direction (the fasciæ thus appearing to be widely separated); and they have also some pale pubescence scattered over the rest of the surface, and so rendering the two bands less definite, but this does not extend along the suture. The two examples are, I think, male and female; if so, there is less difference than usual in the antennal club, which is rather small, oval, with the first joint not quite so long as broad, and not very much larger than the terminal joint.

7. **Cryptorhopalum germanum,** sp. n. (Tab. XIX. figg. 20 *a*, ♂ antenna; 20 *b*, ♀ antenna.)

Breviter ovale, convexum, griseo-pubescens, nigrum, elytris apicem versus plus minusve rufescentibus, fasciisque transversis irregularibus ornatis; antennarum basi pedibusque rufis.
Long. 2–$2\frac{3}{4}$ millim.

Hab. MEXICO, Guanajuato (*Sallé*), Tonila, Colima (*Höge*), Amula, Acaguizotla, Rincon, Cuernavaca (*H. H. Smith*); GUATEMALA, near the city, Capetillo, Dueñas, Zapote (*Champion*).

In this species the elytra are sometimes almost entirely black, and sometimes almost entirely red; in all cases, however, there is a certain extent of red at the tip and some black near the scutellum, but there is no alternation of the red and black; the preapical band of pale pubescence is always distinct, and at the suture sends an angle backwards that connects with the spot at the tip. The premedian band of pubescence is comparatively slender and scanty. The antennæ have the club dark, the apical joint larger than the preceding one, but not twice as large. The thorax is covered with a grey pubescence, with vague darker spots or rather small areas. The punctuation of the upper surface is very fine. The pubescence of the elytra is grey on the basal portions, always more or less flavescent or rufescent on the apical bands and spots; between the bands the pubescence is dark. On the underside the grey pubescence is very distinct.

We have received a large series of this species, which is apparently a common insect in Mexico and Guatemala. It seems to be allied to *C. hæmorrhoidale*, Lec.

8. **Cryptorhopalum argutum,** sp. n.

Regulariter ovale, convexum, griseo-pubescens, nigrum; elytris rufo-variegatis, argute transversim griseo-fasciatis, macula pallida apicali magna; antennarum basi pedibusque rufis.
Long. $2\frac{1}{4}$–$2\frac{3}{4}$ millim.

Hab. MEXICO, Mexico city (*Höge*), Guanajuato (*Sallé*); GUATEMALA, Coban in Vera Paz (*Conradt*).

Var. *cordovanum*, var. n.

Oblongo-ovale, magis elongatum.
Long. 3–$3\frac{1}{4}$ millim.

Hab. MEXICO, Cordova (*Sallé*).

In this species the ground-colour of the elytra is black, more or less fasciate with red; the premedian band of pale pubescence is situate on an area that is more or less distinctly red, and behind it the surface is again darker. This at once distinguishes the insect from *C. germanum*, though they are at first sight very similar. The distinctness of the two is made certain by numerous other points, the most important of which is the considerably larger size of the club of the male antenna. The thorax is uniformly covered with grey pubescence. The punctuation throughout is very fine. The pale pubescence forming the markings on the apical half of the elytra is not at all flavescent, but quite concolorous with that on the anterior parts; the apical spot is remarkably large and definite, and is quite disconnected from the preapical band. Five specimens.

I am not sure that the specimens from Cordova do not represent a distinct closely allied species, but there are only four examples, and two of them are in very bad condition.

9. **Cryptorhopalum bicolor,** sp. n.

Breviter ovale, nigrum, nigro-pubescens, nitidum; elytris pone basin fascia latissima sanguinea; antennarum clava pedibusque fuscis, tibiis, tarsis antennarumque basi rufis.
Long. $2\frac{1}{2}$–$3\frac{1}{8}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*).

Thorax very sparingly and finely punctured and pubescent, shining, black, the pubescence concolorous; the basal lobe very broad, short, abrupt. Elytra finely punctured, with a very broad blood-red band a little distance behind the base, the pubescence concolorous, *i. e.* black on the black portions, sanguineous on the red band. The club of the male antenna is only moderately long and broad, the first joint not greatly longer than the second. The legs and club of the antenna are not black, but more or less infuscate red.

Reitter's *C. rufo-fasciatum* would appear from the description to come between this species and *C. divisum*.

10. **Cryptorhopalum divisum,** sp. n.

Ovale, convexum, nigrum, fulvo-pubescens, elytris pone basin fascia latissima rufa; antennis pedibusque rufis; crebre subtiliter punctatum.
Long. 2½ millim.

Hab. NICARAGUA, Chontales (*Janson*); PANAMA, Bugaba (*Champion*).

Narrower than *C. bicolor*, and readily distinguished by the tawny pubescence. The male is not known, but the female has a short club to the antenna, which is peculiar, inasmuch as the first of the two joints forming the club is not longer than, indeed is slightly shorter than, the terminal joint. Three specimens.

11. **Cryptorhopalum subfasciatum,** sp. n. (Tab. XIX. fig. 21.)

Ovale, sat convexum, nigrum, elytris apicem versus, antennis pedibusque rufis, antennarum clava subfuscescente; elytris post basin fascia transversa, etiam ad apicem macula transversa griseo-pubescentibus, parum conspicuis.
Long. 3 millim.

Hab. MEXICO, Guanajuato (*Sallé*).

This species connects the transversely fasciate forms with those that have concolorous pubescence; the bands of pubescence undoubtedly exist, though but little conspicuous. The thorax is much narrowed in front, black, but with a good deal of white pubescence at the sides, and rather less on the disc, very finely punctate. The elytra are rather densely, somewhat roughly, punctured; they are broadly black on the basal part, and red on the apical part, the one colour merging gradually into the other; the pubescence is rather scanty, and the postmedian band and apical spots are formed by comparatively few hairs. The under surface is densely punctured, griseo-pubescent. The club of the antenna is very much larger in the male than it is in the female; the terminal joint is large, but is distinctly smaller than the first joint of the club.

§ 2. Elytra unicolorous, or obscurely and indefinitely paler towards the tip. Thorax not distorted at the sides.—Species 12–35.

12. **Cryptorhopalum affine.**

? *Cryptorhopalum affine,* Casey, Journ. New York Ent. Soc. viii. p. 157 (1900) [1].

Hab. NORTH AMERICA, California [1], Arizona (*Morrison, in coll. Sharp*).—MEXICO, N. Sonora (*Morrison*).

Distinguished from the following species by the stiffer, less conspicuous pubescence, which is slightly flavescent in colour, and by the more elongate club of the male antenna. I am not at all sure that this is really the same as the N.-American insect with the description of which I identify it.

13. **Cryptorhopalum guatemalenum,** sp. n.

Breviter ovale, nigrum, griseo-pubescens, elytrorum margine ad apicem vage rufescente; crebrius, fortiter punctatum, haud nitidum; pedibus rufis, femoribus nigricantibus; antennis medio testaceo, clava elongata, apicem versus fuscescente.

Long. 3 millim.

Hab. GUATEMALA, near the city, Zapote, Capetillo (*Champion*).

The pubescence in this insect covers the surface more evenly, and on this account and its paler colour is more conspicuous than usual. The thorax is distinctly punctured, even on the disc; the punctuation of the elytra is rather coarse and rough. On the under surface the metasternum is coarsely punctate, the punctuation and pubescence dense. The club of the antenna is long and broad; the terminal joint is always dark, and is not so short as in the allied species: in the male it is two-thirds or three-fifths the length of the preceding joint; in the female it is not much shorter than the preceding joint. Twenty specimens. One of them, from Guatemala city, has the thorax less punctate, and the legs, including the femora, brighter red.

14. **Cryptorhopalum teapense,** sp. n.

Breviter ovale, nigrum, elytris piceo-rufis, flavo-pubescens, antennis pedibusque rufis; elytris crebrius sat fortiter punctatis; antennarum clava parum elongata.

Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Teapa in Tabasco (*H. H. Smith*).

Extremely similar to the specimens of *C. affine* with red elytra, but readily distinguished therefrom by the smaller club of the antenna. In the male the terminal joint is unusually small, is narrower than the preceding joint, and only about one-third as long. In the females the antennal distinctions of the two species are much less marked. There is a fine punctuation on the disc of the thorax. The punctuation of the under surface is very dense. The legs, including the femora, are red. Five specimens.

15. **Cryptorhopalum appendiculatum,** sp. n. (Tab. XIX. fig. 22, ♂ antenna.)

Breviter ovale, nigrum, nitidum, subtiliter fusco-pubescens, antennis pedibusque fuscis; elytris fortiter sat crebre punctatis; antennarum clava elongata, articulo ultimo minuto.

Long. $2\frac{1}{2}$ millim.

Hab. MEXICO, Rincon in Guerrero (*H. H. Smith*).

Distinguished from *C. teapense* by the black colour, and by the very elongate club of the male antenna, which, however, is chiefly formed by one joint, the terminal joint being minute. The thorax, though quite shining, is definitely punctate. The punctuation of the elytra is also definite, and is not dense and confluent on the basal part. The terminal joint of the antenna in the male is only about one-fourth as long as the preceding joint. The femora are nearly black. One specimen.

16. **Cryptorhopalum celatum,** sp. n.

Ovale, nigrum, griseo-pubescens, sat nitidum; antennis pedibusque rufis, femoribus nigricantibus; elytris crebrius fortiusque punctatis; antennarum clava modice elongata, crassiuscula.
Long. $2\frac{3}{4}$ millim.

Hab. MEXICO, Acaguizotla, Rincon, and Chilpancingo in Guerrero, Cuernavaca (*H. H. Smith*).

Extremely close to *C. guatemalenum*, but with the pubescence of the upper surface less uniform and less evenly distributed, it being more concentrated on the sides of the thorax and more scanty on the disc, which is very indistinctly punctate. The elytra have a rather rough and coarse punctuation, but nevertheless the surface is somewhat shining, the pubescence being somewhat short and fine. The under surface is very densely punctate. The club of the male antenna is rather large, stout, the first joint scarcely twice as long as the terminal one; that of the female is much smaller. Seven specimens.

17. **Cryptorhopalum cribriceps,** sp. n.

Ovale, convexum, nigerrimum, subnitidum, nigro-griseo-pubescens, capite elytrisque fortiter profundeque punctatis; palpis antennarumque medio testaceis.
Long. $3\frac{1}{8}$ millim.

Hab. NICARAGUA, Chontalēs (*Janson*).

We have only one specimen of this species, but it is so distinct that it will be easily recognized. The punctuation of the head is coarse, close, and deep. The thorax is very large, finely punctate. The punctuation at the base of the elytra is dense and coarse, becoming finer and more distant at the apex; the pubescence is blackish, but in certain lights is distinctly grisescent. The legs are black, the tarsi fuscous. The club of the antenna is rather small, the terminal joint quite evidently smaller than the preceding one. The punctuation of the metasternum is more coarse than usual.

18. **Cryptorhopalum laterale,** sp. n.

Ovale, fere angustum, nigrum, nitidum, griseo-pubescens, antennis tarsisque rufis; prothorace disco fere impunctato, ad latera (præsertim angulos anteriores versus) fortiter punctato.
Long. 3 millim.

Hab. MEXICO, Jalapa (*Höge*).

Of this insect also we have only one specimen, but the species will be readily distinguished by the thoracic punctuation, which is remarkably coarse at the sides and anterior angles, in striking contrast to the almost impunctate disc. The head is more definitely punctured than usual. There is much pallid pubescence about the sides of the thorax. The punctuation of the elytra is so distant that the surface is shining. The first joint of the club of the antenna is not quite twice as long as the second. The punctuation of the under surface is dense and rather fine.

19. **Cryptorhopalum incanum.**

? *Cryptorhopalum incanum,* Reitter, Verh. Ver. Brünn, xix. p. 47 (1881) [1].

Ovale, convexum, nigrum, elytris sordide rufis, æqualiter griseo-pubescens; elytris dense fortiter punctatis; antennis pedibusque rufis, illarum clava apicem versus fuscescente.
Long. 2–2¼ millim.

Hab. Mexico (*Bilimek* [1]), Tapachula (*Höge*).

This species is almost evenly covered with griseous pubescence, so that it has a dull, uniformly grey appearance; the punctuation of the elytra, too, is remarkably dense, and the surface is rough, the individual punctures being ill-defined and only indefinitely impressed. The club of the male antenna is long and slender, the terminal joint more than half the length of the preceding one. One pair only has been received. It is somewhat doubtful whether this is really Reitter's species, but our insect must be at any rate very closely allied thereto. It is smaller than *C. teapense* or *C. guatemalenum*, and has the punctuation of the elytra extremely dense. The club of the antenna is oblong-oval, and differs but little from that of *C. guatemalenum*.

20. **Cryptorhopalum robustum,** sp. n.

Late ovale, nigerrimum, crebre, minus subtiliter punctatum, nitidum, nigro-fulvo-pubescens, antennis pedibusque rufis.
Long. 3½–4 millim.

Hab. Mexico, Jalapa (*Höge*).

One of the largest and broadest of the genus, and with the surface shining, although the punctuation is rather coarse. The pubescence has a slight tawny tinge, but not vivid enough to prevent the insect from appearing black. The thorax is large, with the basal lobe broad; a large portion of the scutellum is exposed. The punctuation, even on the disc of the thorax, is quite distinct. The legs and the club of the antenna are dark red. The club is only moderately long and broad, the first joint not quite twice as long as the second. Three specimens.

21. **Cryptorhopalum rufipes.**

? *Cryptorhopalum rufipes,* Reitter, Verh. Ver. Brünn, xix. p. 4 [1].

Latum, ovale, convexum, nigerrimum, antennis pedibusque rufis, parce subtiliter punctatum et nigro-pubescens, sat nitidum.
Long. 3 millim.

Hab. Mexico (*Bilimek* [1]), Alto del Tizar (*Flohr*), Puebla, Cordova (*Sallé*).

This species is readily distinguished by the characters given above, the comparatively fine and distant sculpture making it somewhat remarkable amongst the other black forms. The male has the club of the antenna long and rather narrow in proportion to the length, the first of its two joints being distinctly longer than broad, and the

second is evidently, though not greatly, shorter than the first; the total length of the club is a little less than $\frac{1}{2}$ millim. In the female the club is much smaller. The lobe of the base of the thorax is broad and abrupt, the sinuation on each side of it being very strong.

I refer six specimens to this species, but there are several others that are either varieties or allied forms.

22. **Cryptorhopalum gravidum,** sp. n.

Ovale, convexum, crebre subtiliter punctatum, nigro-pubescens, sat nitidum; pedibus fusco-rufis, femoribus nigris; antennis medio flavo, clava nigricante.
Long. 3–3$\frac{1}{4}$ millim.

Hab. MEXICO, Chilpancingo, Cuernavaca (*Sallé*).

In this species the club of the male antenna is very elongate, but it is broad and the terminal joint is quite small, being only one-fourth the length of that preceding it. The thorax is quite definitely punctured, even on the disc; the punctuation of the elytra is more scanty, but their pubescence is very conspicuous on the apical parts. Four specimens.

23. **Cryptorhopalum ventanense,** sp. n.

Ovale, convexum, crebre subtiliter punctatum, fusco-nigro-pubescens; pedibus fusco-rufis, femoribus nigris; antennis medio flavo, clava rufescente.
Long. 3$\frac{1}{4}$ millim.

Hab. MEXICO, Ventanas in Durango (*Höge*).

In this insect the club of the male antenna, besides being paler, is more slender than it is in *C. gravidum*, but the relative proportions of its two joints are about the same. The pubescence on the elytra is not quite so black. Three specimens.

24. **Cryptorhopalum funestum,** sp. n.

Oblongo-ovale, sat convexum, nigrum, nigro-pubescens, crebrius punctatum; antennis medio flavo, clava nigricante.
Long. 2$\frac{1}{2}$ millim.

Hab. MEXICO, Ventanas (*Forrer*), Chilpancingo (*H. H. Smith*).

Smaller than *C. gravidum*, and more closely punctured, being also narrower and more oblong in form and with the thoracic lobe much narrower. The club of the male antenna is elongate, the terminal joint being small, about one-third the length of the first joint. The species is further distinguished by possessing a small, indistinct, round impression on the centre of the metasternum. The colour of the pubescence varies a little, and seems somewhat less black on the underside than it is above. This species, at first sight, much resembles *C. subtile*, which, however, has longer and thinner legs and very differently formed antennæ. Three specimens.

25. **Cryptorhopalum misellum,** sp. n.

Ovale, convexum, nigrum, haud nitidum, crebre subtiliter punctatum, nigro-pubescens; antennis rufis, pedibus sordide rufis.

Long. 3 millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

Distinguishable from the four preceding species by the finer punctuation of the upper surface, and from *C. subtile* by its comparatively broader form and shorter legs. We have only two specimens: they are females, and one of them is immature and piceous in colour. The club of the antenna is of moderate size, the terminal joint rather large, being a good deal more than half the size of the first joint.

26. **Cryptorhopalum subtile,** sp. n.

Oblongo-ovale, leviter convexum, nigerrimum, brevissime fusco-nigro-pubescens, sat nitidum; antennis rufis, pedibus sordide rufis.

Long. 3–3½ millim.

Hab. GUATEMALA, Calderas, Chiacam (*Champion*).

The most oblong in form of this group of species; rather narrow, of an intense black colour, which is scarcely rendered less black by the very short fine pubescence. The punctuation of the thorax is both fine and scanty; the basal median lobe is broad and truncate. The elytra are very long in comparison with the thorax. The club of the male antenna is very long; the terminal joint long, rather more than half the length of the preceding one. The club in the female is much shorter. The legs are very slender, the femora black.

Mr. Champion found twenty-five specimens at Calderas. The single individual from Chiacam is more densely punctate and may belong to another species.

27. **Cryptorhopalum sordidum,** sp. n.

Oblongo-ovale, minus convexum, nigrum, griseo-pubescens, antennis medio, tibiis tarsisque rufis, crebrius subtiliter punctulatum; antennarum clava, oblongo-ovali, sat magna.

Long. 2–2½ millim.

Hab. MEXICO, Guanajuato (*Sallé*).

A rather long and narrow form, not closely allied to any other, though it has no strikingly peculiar characters. The club of the antenna is less largely developed than usual, and differs comparatively little in the two sexes; it is quite black, and the articulation separating the two joints is very distinct, the first of the two joints being distinctly longer than the last, and a little longer in the male than in the female. The thorax is closely, but very finely punctate, the punctuation being similar all over its surface. The elytra are finely and rather closely punctured, and clothed with a fusco-griseous pubescence.

The nine specimens, from the Sallé collection, are not in a very good state of preservation. The elytra are sometimes rufescent towards the extremity.

28. **Cryptorhopalum brevicolle,** sp. n.

Breviter oblongo-ovale, sat convexum, nigrum, subtiliter fulvo-pubescens, antennis pedibusque rufis, crebre, subtiliter punctatum; maris antennarum clava sat magna, articulis minus disparibus.
Long. vix 2 millim.

Hab. PANAMA, Tolé, David (*Champion*).

The smallest of our species of this genus, and one in which there is least disparity in the sizes of the two joints of the antennal club. The club in the male is a good deal larger than it is in the female, and the first joint is distinctly larger than the second; in the female the two joints are even less unequal in size. The punctuation of the thorax is quite fine, that of the elytra a little coarser; the surface is not shining, and the tawny or flavescent pubescence does not detract much from the black appearance. Three specimens.

We have five others almost as small as *C. brevicolle*, but they apparently represent as many different species.

29. **Cryptorhopalum chontalense,** sp. n.

Subhemisphæricum, nigricans vel rufescens, dense æqualiter griseo-pubescens; antennis pedibusque rufis, illarum maris clava elongata.
Long. $2\frac{1}{2}$–$2\frac{3}{4}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

The surface in this insect is densely covered with a pallid pubescence that entirely conceals the sculpture, which, however, is extremely fine. The club of the male antenna is elongate, the terminal joint a little infuscate, nearly half as long as the preceding; in the female the club is much shorter and is oval. The pubescence of the under surface is very dense, and on the metathorax has a slight blue tinge. The colour of the surface varies from red to nearly black. In the male the pubescence of the last ventral plate forms a very short tuft on each side of the middle projecting backwards. Four specimens.

30. **Cryptorhopalum ochraceum,** sp. n.

Breviter ovale, convexum, omnium densissime ochraceo-griseo-pubescens, antennis pedibusque rufis; maris antennarum clava ovali.
Long. 2–$2\frac{1}{2}$ millim.

Hab. BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Cahabon (*Champion*).

Distinguished from all the other forms here described, except *C. chontalense*, by the extremely dense pubescence, which everywhere covers the surface and conceals the sculpture. The club of the antenna of the male is moderately large, oval, the terminal joint infuscate, fully half as long as the preceding one. In the female the club is much smaller. Distinguished from *C. chontalense* by the very dense ochraceous pubescence and narrower form; the tufts at the apex of the last ventral plate of that insect are not present in *C. ochraceum*. Three specimens.

31. **Cryptorhopalum globuloide,** sp. n.

Subhemisphæricum, rufum, parce subtiliter punctatum et pubescens; antennis clava nigra, parum magna, articulo ultimo præcedente majore.

Long. $2\frac{1}{2}$ millim.

Hab. NICARAGUA, Chontales (*Janson*).

Of this species we have only a single specimen in indifferent condition, but which I do not hesitate to name, as it presents a character foreign to nearly all our other members of the genus, inasmuch as the last joint of the antenna is rather larger than that preceding it. This and the globular form, the scanty and fine punctuation and pubescence, and the uniform red colour, should readily lead to the identification of the insect. It has a small head, and the eyes are smaller than in any other form.

32. **Cryptorhopalum cyphonoide,** sp. n.

Ovale, convexum, nigricans, elytris sæpius rufis, subtiliter punctatum, æqualiter pubescens, haud nitidum, antennis pedibusque rufis.

Long. 3-$3\frac{1}{4}$ millim.

Hab. MEXICO, Jalapa (*Höge*), Cordova (*Sallé*).

One of the most commonplace-looking species of the genus, somewhat reminding one of a *Cyphon*. The club of the antenna is rather slender, oval, the terminal joint moderately large, but a good deal smaller than the preceding one. Palpi yellow. Thorax with a fine, moderately close, punctuation, which, as well as the pubescence, is as marked on the disc as on the sides, though not quite so dense. Elytra only finely and sparingly punctured, but with rather long, evenly distributed pubescence. Legs including the femora, quite red. The elytra are sometimes blackish in colour, but even then the humeral prominence is reddish. Seven specimens.

I have also provisionally assigned to *C. cyphonoide* two or three specimens from Guatemala, in which the punctuation and pubescence are more scanty and the surface therefore more shining; they may belong to another species.

33. **Cryptorhopalum mordelloide,** sp. n.

Oblongo-ovale, convexum, nigrum, flavo-griseo-pubescens, elytris brunneis, subtiliter punctatum, fere æqualiter pubescens, antennis pedibusque rufis.

Long. $3\frac{1}{4}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Though from the description this insect appears to be extremely similar to *C. cyphonoide*, yet it has the elytra straighter at the sides, and is therefore different in form. The club of the antenna is similar in shape in the two species. The elytra have a less scanty punctuation and pubescence than in *C. cyphonoide*. From *C. incanum*, and the species allied thereto, *C. mordelloide* can be distinguished by the more elongate and oblong form and the much finer punctuation of the elytra. It also resembles

C. fraternum, but there is not the least trace of any distortion of the sides of the thorax.

The three examples obtained of this species are probably all females; they closely resemble one another, except that the club of the antenna is a little darker in one of them. Mr. Champion also found a female at Dueñas and a male at Calderas that I have for the present referred to *C. mardelloide*. The form is still more oblong, and the elytra more elongate. This is almost all there is to distinguish the female, except that the punctuation is slightly more evident. The male example has the antennal club very large.

34. **Cryptorhopalum ducale,** sp. n.

Ovale, rufum, elytris læte viridi-cyaneis; tenuiter pubescens, nitidum, subtilius punctatum.
Long. $4\frac{1}{4}$ millim.

Hab. GUATEMALA, Las Mercedes 3000 feet (*Champion*).

This species cannot be confounded with any other on account of the bright metallic colour of the upper surface and the much-diminished pubescence. The antennæ are red, with an elongate club, the first joint of which is nearly three times as long as the last. The pubescence of the upper surface is fine, rather scanty and depressed, and the punctuation is very fine and more distant than usual. The under surface and legs are red, the pubescence on the ventral segments rather more conspicuous than elsewhere. One specimen, probably a male.

35. **Cryptorhopalum equisoleæ,** sp. n. (Tab. XIX. figg. 23; 23 *a*, breast.)

Ovale, sat convexum, nigerrimum, glabrum, thorace elytrisque punctis rudis nonnullis impressis.
Long. $2–2\frac{1}{4}$ millim.

Hab. MEXICO, Rincon in Guerrero (*H. H. Smith*); BRITISH HONDURAS, Belize (*Blancaneaux*).

This insect, though very peculiar in appearance, has apparently but little to distinguish it from a normal *Cryptorhopalum*, though the ocellus is extremely indistinct; its intense black colour (only the minute intermediate joints of the antennæ being yellowish), the quite glabrous surface, and the peculiar, large, but imperfect, punctures on the upper surface are diagnostic. On the under surface it presents a very remarkable feature, the whole of the middle of the metasternum being highly polished and quite smooth, and this space limited by a horseshoe-shaped raised line; the prosternum is rugose, the sides of the metasternum are coarsely punctured, the ventral segments finely punctured. The middle femora are laminate and definitely punctured. The tarsi are black. The club of the antenna is oval, its two joints closely co-adapted, the terminal joint not quite so large as the preceding one. Five specimens.

§ 3. Thorax somewhat distorted at the sides owing to the large size of the antennal cavity.—Species 36–41.

The species of this section are more oblong in form than the others of the genus.

36. **Cryptorhopalum discedens,** sp. n. (Tab. XIX. fig. 24, antenna.)

Suboblongum, leviter convexum, nigrum, antennis, tibiis tarsisque rufis; parce subtiliter punctatum et pubescens; antennarum clava magna, subovali.

Long. 2 millim.

Hab. Mexico, Teapa (*H. H. Smith*).

The club of the antenna is both long and broad, the terminal joint large, though a good deal smaller than the preceding one. There is scarcely any punctuation on the thorax, but there is a griseous pubescence at the sides. The elytra are finely and sparingly punctured, and have a scanty griseous pubescence, which is short and but little conspicuous. The punctuation of the abdomen is dense and fine, and the pubescence correspondingly conspicuous. The pubescence has a slight flavescent tint, and this makes the abdomen look tawny. One specimen.

37. **Cryptorhopalum amulæ,** sp. n.

Oblongum, leviter convexum, nigrum, griseo-pubescens, antennarum clava fuscescente, tarsis rufis; crebre subtiliter punctatum, haud nitidum; antennarum clava elongata.

Long. $2\frac{1}{2}$ millim.

Hab. Mexico, Amula in Guerrero 6000 feet (*H. H. Smith*).

More elongate than *C. discedens*, and readily distinguished by the more conspicuous punctuation and pubescence, and the different form and colour of the club of the antenna, which is narrower and more oblong than it is in *C. discedens*, and the two joints forming it are less accurately connected together. One specimen.

38. **Cryptorhopalum vestitum,** sp. n.

Suboblongum, nigrum, supra fuscescens, setosum, antennis pedibusque rufis, parce subtiliter punctatum; maris antennarum clava maxima.

Long. 3 millim.

Hab. Guatemala, Purula (*Champion*).

The pubescence of the upper surface is stiffer and rougher than usual in this species, and the ground-colour of the elytra is not pure black; the pubescence is griseous, with a slight flavescent tinge. The side of the thorax is strongly arched over the antennal fossa. The legs, including the femora, are red, the tibiæ and tarsi long and very slender. The large club of the male antenna is somewhat slender-oval, the first joint not quite twice as long as broad, the terminal joint large, rather more than half as long as the preceding one. Two specimens.

39. **Cryptorhopalum fraternum,** sp. n.

Suboblongum, leviter convexum, nigrum, elytris vel rufis vel fusco-nigris, subtiliter pubescens, antennis pedibusque testaceis; maris antennarum clava magna, ovali, articulo ultimo perparvo.
Long. 3 millim.

Hab. Mexico, Omilteme, Xucumanatlan, and Chilpancingo in Guerrero, 4600 to 8000 feet (*H. H. Smith*).

Very similar to *C. vestitum*, but rather narrower, with the sides of the thorax less flattened out, the pubescence just a little shorter, and the club of the male antenna strongly different; this latter forms a moderately narrow, oval piece, having the terminal joint minute and closely connected with the main joint. The club in the female is of similar shape, and the terminal joint is about as large as it is in the male, but the preceding joint is a good deal smaller. The eyes of the male are somewhat larger than those of the female. Eleven specimens.

The female of this insect having the sides of the thorax almost simple, it is very liable to be mistaken for a male belonging to the other section, especially as the antenna is very like that of the male of several other species. The variation in colour, from nearly black to pale red or testaceous, is partly due to maturity or the opposite, but probably only partly so; the colour of the legs varies like that of the body.

40. **Cryptorhopalum vicinum,** sp. n.

Suboblongum, leviter convexum, nigrum, elytris vel rufis vel fusco-nigris, subtiliter pubescens, antennis pedibusque testaceis; maris antennarum clava oblongo-ovali, articulo ultimo sat parvo.
Long. $2\frac{1}{2}$–$3\frac{1}{4}$ millim.

Hab. Mexico, Jalapa, Cerro de Plumas (*Höge*).

This species varies in colour like *C. fraternum*, and is, so far as I can find, only to be distinguished by the more slender antennæ, and those of the male having the terminal joint larger in comparison with the preceding one. When the sexes of the two are compared, their distinction is not difficult. In the female of *C. vicinum* the club is, in proportion to its width, considerably longer than usual. Eight specimens.

41. **Cryptorhopalum pedestre,** sp. n. (Tab. XIX. figg. 25, ♀; 25 *a*, ♂ antenna.)

Suboblongum, convexum, fusco-nigrum, supra ferrugineum, griseo-pubescens, pubescentia in elytris longitudinaliter vittata; antennis pedibusque rufis, illarum clava maxime elongata.
Long. $3\frac{1}{2}$–4 millim.

Hab. Guatemala, Cerro Zunil 4000 to 5000 feet (*Champion*).

One of the most distinct members of the genus, the antennal club in the female being elongate (more so, indeed, than in the males of many species), while in the male it is very elongate, with the terminal joint longer than broad, though much shorter

than the basal joint of the club. The pubescence, too, is peculiar, being vaguely arranged so as to form somewhat interrupted longitudinal vittæ. The legs are more elongate than they are in the other species of *Cryptorhopalum*. The punctuation is extremely fine, and the pubescence is long and has a flavescent tint. Nine specimens.

I am not able to give any information as to the following species, briefly described by Reitter without any reference to the antennæ :—

Cryptorhopalum globulum.

Cryptorhopalum globulum, Reitter, Verh. Ver. Brünn, xix. p. 46 [1].

Hab. Mexico (*Bilimek* [1]).

Cryptorhopalum puberulum.

Cryptorhopalum puberulum, Reitter, l. c. p. 46 [1].

Hab. Mexico (*Bilimek* [1]).

Cryptorhopalum cribripenne.

Cryptorhopalum cribripenne, Reitter, l. c. p. 46 [1].

Hab. Mexico (*Bilimek* [1]).

Cryptorhopalum bilimeki.

Cryptorhopalum bilimeki, Reitter, l. c. p. 47 [1].

Hab. Mexico (*Bilimek* [1]).

Cryptorhopalum villosum.

Cryptorhopalum villosum, Reitter, l. c. p. 47 [1].

Hab. Mexico (*Bilimek* [1]).

Subfam. *TRINODINÆ*.

APSECTUS.

Apsectus, Leconte, Proc. Acad. Phil. 1854, p. 113.

This genus is known only from a single North-American species. It is closely allied to the Old World *Trinodes*, and in fact exactly similar in appearance. The North-American insect is rare and unknown to me, but it seems clear from descriptions that it is different from any of our forms.

1. **Apsectus hystrix**, sp. n.

Ovalis, parum convexus, fusco-setosus, antennis pedibusque testaceis, nitidus, parce punctatus.
Long. $1\frac{3}{4}$ millim.

Hab. Mexico, Amula in Guerrero (*H. H. Smith*).

Shining black, densely clothed with long erect hair of a dark, though not black, colour. The terminal joint of the antenna of the male is both long and stout; it is not black, though it and the other two joints of the club are a little infuscate. When the hairs are removed the punctuation of the elytra is seen to consist of distant and fine, but definite, punctures. The tibiæ and tarsi are yellow, the femora infuscate. Seven specimens.

2. **Apsectus centralis,** sp. n.

Ovalis, sat convexus, niger, fusco-setosus, antennis pedibusque testaceis, nitidus, parce subtiliter punctatus.
Long. 2 millim.

Hab. GUATEMALA (*Sallé*), Guatemala city (*Champion*).

In this species the terminal joint of the male antenna is very elongate, more than twice as long as broad; in the female it is only about half as long, and is oval, rather than oblong, in form. We have received only three specimens, and they are in bad condition. The insect is distinctly larger than *C. hystrix*, and has the last joint of the male antenna considerably longer.

3. **Apsectus obscurus,** sp. n.

Breviter ovalis, sat convexus, niger, minus longe setosus, subtilissime punctatus, sat nitidus; antennis pedibusque testaceis, illarum clava nigra.
Long. 2¼ millim.

Hab. MEXICO, Toxpam (*Sallé*).

We have only one female of this species, but it is clearly different from *A. centralis*, the setosity being shorter and much less erect; the shape is broader and the surface less polished. The punctures on the elytra can scarcely be distinguished.

4. **Apsectus minutus,** sp. n.

Brevissime ovalis, parum convexus, niger, dense sat longe fusco-setosus, subtilissime punctatus; antennis pedibusque testaceis.
Long. 1 millim.

Hab. MEXICO, Chilpancingo 4600 feet (*H. H. Smith*).

This is much smaller than any other known *Apsectus*, and compared with *A. hystrix* has the setæ shorter. The club of the antenna of the male is broader in proportion to its width, and is oval, rather than oblong, in form, its width being greater in proportion to its length than it is in any of the other species of the genus. The punctures of the elytra are so extremely minute that they are not distinguishable when the setosity is not rubbed off. One specimen.

Fam. BYRRHIDÆ *.

This is one of the smaller families of Coleoptera, comprising altogether some 200 to 300 species. It is not clear that it can be separated from either Parnidæ or Dascillidæ. The four recognized subfamilies of Byrrhidæ have little connection beyond the fact that all have peculiar arrangements for retraction of the legs and packing them very close to the body.

The typical subfamily Byrrhinæ is not represented in our collections.

Subfam. *NOSODENDRINÆ.*

NOSODENDRON.

Nosodendron, Latreille, Gen. Crust. et Ins. ii. p. 43 (1807) ; Erichson, Ins. Deutschl. iii. p. 465.
Dendrodipnis, Wollaston, Ent. Monthly Mag. x. p. 33 (1873).

This at present is a genus of some ten species, but is very widely distributed. *Dendrodipnis* was founded by Wollaston for an insect destitute of fascicles, and our species therefore all belong to it ; but it cannot at present be adopted, as the clothing of the surface does not divide the genus satisfactorily. In North America only two species are known—*N. californicum*, Horn (a true *Nosodendron* and distinct from *N. fasciculare*), and *N. unicolor*, Say, a *Dendrodipnis.* So far as hitherto known these insects, both in the larva and imago stage, live in the sap flowing from wounded trees ; but this is probably not the case with *N. mexicanum,* which was found by Flohr in muddy places.

The members of this genus have the gula striate, so as to form a stridulating-organ scratched by the front of the prosternum. The structure of the mentum affords excellent characters for the distinction of the species. Our seven representatives thus fall into four categories, viz. :—

1. Mentum broad, without impressions.—*N. latifrons.*
2. Mentum with three longitudinal grooves, joined in front by the convergence of the two outer grooves.—*N. politum.*
3. Mentum with a transverse groove near the front.—*N. subtile, N. derasum.*
4. Mentum with an oblong longitudinal impression divided into two by a raised carina.—*N. mexicanum, N. championi, N. chiriquense.*

1. **Nosodendron mexicanum,** sp. n.

Ovale, fere angustum sat nitidum, nigrum, pedibus piceis, antennis testaceis ; dense subtilissime punctatum, elytris seriebus punctorum majorum ad basin haud desinentibus.
Long. 4 millim.

Hab. Mexico, Jalapa (*Flohr*).

One of the narrowest species of the genus. The upper surface bears a minute punctuation, which is wanting on the middle of the thorax and on the sutural portion

* By D. Sharp.

of the base of the elytra, but is very dense on the apical portion of the latter; on the other hand, the large serial punctures are very definite on the base of the elytra, but become quite fine behind, and are lost among the minute punctuation of the apex. Mentum divided into three longitudinal areas by a pair of parallel lines down the middle, the middle one of the three areas being very narrow.

2. **Nosodendron subtile,** sp. n.

Breviter ovale, nigerrimum, sat nitidum, pedibus piceis, antennis testaceis; elytris punctorum seriebus et apicem versus dense minute punctatis.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui 2500 to 4000 feet (*Champion*).

Resembles *N. championi*, but distinct by the minutely punctate apical portion of the elytra, by two of the series of elytral punctures being incomplete near the scutellum, and by the differently formed mentum, which is coarsely punctate and nearly simple, being only transversely impressed in front. The present insect is shorter than *N. mexicanum*, and has the fine punctuation of the upper surface less extensive and the mentum differently formed. One specimen.

3. **Nosodendron championi,** sp. n. (Tab. XIX. figg. 26; 26 *a*, sculpture of elytra.)

Ovale, nigerrimum, nitidum, pedibus piceis, antennis testaceis; thorace ad latera subtiliter punctato, elytris seriebus integris punctorum majorum et ad apicem reticulatis.

Long. $3\frac{1}{4}$–$3\frac{1}{2}$ millim.

Hab. GUATEMALA, Chiacam in Vera Paz (*Champion*).

In this species the series of elytral punctures are entire, each one extending from the base to the apex; on the apical portion the punctures become finer and each one is the centre of a peculiar network of fine punctures, as shown in the figure (fig. 26 *a*). This peculiar sculpture may be seen in some of the other members of the genus, but in none of them is it so highly developed as in *N. championi*. The head and thorax are distinctly punctate, but the disc of the latter is nearly smooth. The middle of the mentum is occupied by a large depression, in the centre of which there is a carina; the unimpressed lateral portions are small and finely punctate. The parts of the mouth are more hairy than usual. Fourteen specimens, exhibiting but little variation *.

* I received a species closely allied to this in Castelnau's collection of *Cyclonotum*; it may be the form referred to as *Nosodendron cribratum*, Fleutiaux & Sallé (Ann. Soc. Ent. Fr. 1889, p. 392), but is certainly not *Cercyon cribratus*, Cast., as they supposed, for the parts of the mouth cannot be seen, while Castelnau described them as visible in his species. This insect is $3\frac{3}{4}$ millim. long, allied to *N. championi*, having the sutural series of punctures entire and the mentum with a large divided impression; it differs from *N. championi* by the entire absence of the hexagonal sculpture, which is replaced by a very minute punctuation, more dense at the tip of the elytra than elsewhere. *Hab.* ANTILLES, Guadeloupe. The species may be called *N. cribratum*, though it cannot be referred to Castelnau.

4. **Nosodendron chiriquense,** sp. n.

Ovale, nigerrimum, nitidum, pedibus piceis, antennis testaceis; elytris seriebus punctorum ad basin prope suturam desinentibus.

Long. 3 millim.

Hab. PANAMA, Volcan de Chiriqui below 4000 feet, Bugaba (*Champion*).

This species has no punctuation on the thorax, and this character, and the fact that the two inner series of punctures on the elytra are obliterated at the base, readily distinguish it from *N. championi*, which it resembles extremely at first sight. The sculpture of the elytra has the peculiar "cell-arrangement" at the tip, but not nearly so well developed as it is in *N. championi*. The mentum has a large oblong impression on the middle divided into two parts by a strong carina. This character and the absence of the dense fine punctuation on the apical half of the elytra easily separate *N. chiriquense* from *N. subtile*. Seventeen specimens.

5. **Nosodendron derasum,** sp. n.

Ovale, convexum, nigrum, nitidum, pedibus piceis, antennis rufis; elytris seriebus punctorum ad basin prope suturam desinentibus.

Long. $3\frac{1}{4}$ millim.

Hab. PANAMA, Volcan de Chiriqui 3000 feet (*Champion*).

This insect agrees with *N. subtile* in the mentum having a transverse impression, or groove, near the front; it differs from that species, however, in the fact that the apical portion of the elytra has a "cellular arrangement" of the sculpture, instead of a minute close punctuation. *N. derasum* is much shorter in form than *N. mexicanum*, and the surface is more polished than it is in *N. subtile*. The punctures of the elytral series are not so large as in the allied species, and the punctuation of the metasternum is much reduced. The punctuation of the head is quite distinct, though fine, and there is a scanty fine punctuation at the sides of the thorax. One specimen.

6. **Nosodendron politum,** sp. n.

Late ovale, nigerrimum, nitidum, antennis piceo-testaceis; elytris seriebus punctorum ad basin prope suturam desinentibus, punctis remotis sed ad apicem discretis.

Long. $3\frac{3}{4}$–4 millim.

Hab. PANAMA, Volcan de Chiriqui 3000 to 4000 feet (*Champion*).

The highly polished surface is in this species not diminished by any minute punctuation at the apex of the elytra. The clypeus is finely, but not densely punctured. The thorax is highly polished, but there is a patch of definite punctures on each side. The elytral series of punctures are perfectly regular and distinct on the apical parts. Mentum with two longitudinal grooves converging in front, and with a third longitudinal groove along the middle. Seven specimens.

7. **Nosodendron latifrons,** sp. n.

Late ovale, nigerrimum, nitidum, antennis piceo-testaceis; elytris seriebus punctorum ad basin desinentibus, ad apicem subtilibus; clypeo latissimo.
Long. 4 millim.

Hab. PANAMA, Bugaba (*Champion*).

We have only one specimen of this species; it is very distinct, on account of the short broad head and of the mentum being without grooves. At first sight *N. latifrons* is very similar to *N. politum*. Head very finely, distinctly punctured. Thorax impunctate. Base of the elytra in the middle free from punctuation; elsewhere with series of remote, moderately large punctures, which become smaller towards the tip, where each is surrounded by an irregular large area, only indefinitely marked out by minute punctures.

Subfam. *LIMNICHINÆ.*

A very distinct subfamily, consisting, according to the Munich Catalogue, of about twenty species of minute Coleoptera, that frequent very wet and muddy places. Since 1868 the number of described representatives has been increased to about fifty. The most important recent work on the subfamily is the Revision of the North-American forms by Casey [Ann. New York Acad. v. (1890)], who recognizes eighteen species. I place the genus *Ersachus* in the Limnichinæ only because Erichson did so, and because the Elminæ, to which it belongs, have already been treated in a previous volume of this work.

EULIMNICHUS.

Limnichus, subgen. *Eulimnichus,* Casey, Ann. New York Acad. v. p. 146 (1890).

Eulimnichus is the American analogue of the European genus *Pelochares,* from which it is well distinguished by the sulcate prosternum, a character apparently special to the American Limnichinæ. It has hitherto consisted of seven North-American species.

1. **Eulimnichus ephistemus,** sp. n.

Breviter ovalis, convexus, nitidus, niger, glaber.
Long. 1⅓ millim.

Hab. MEXICO, Cordova (*Sallé*); GUATEMALA, near the city, San Gerónimo, San Joaquin (*Champion*); NICARAGUA, Chinandega (*Sallé*).

The smallest and least elongate of the group of species with diminished clothing, and distinguished from all other forms by its polished surface, and by the absence of hairs and punctuation, even on the head. There is a minute pubescence on the

ventral segments, which makes them appear dull. The prothoracic front angles are not spinose. The prosternal impression does not extend much more than half the length from back to front. Six specimens.

2. **Eulimnichus sublævis,** sp. n.

Ovalis, convexus, niger, nitidus, obsolete punctatus, parce brevissime setosus, fere nudus; capite opaco, vertice sublævi.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

This insect agrees with *E. ephistemus* in that the sculpture of the head is much more effaced than it is in the following species. *E. sublævis* is, however, much more elongate than *E. ephistemus*, and the integument is not polished and highly shining, but under a good power ($\frac{1}{2}$-inch) exhibits a peculiar sculpture consisting of distant and rather large, but extremely shallow punctures, accompanied by a fine reticulation; the excessively minute setæ are only conspicuous on the thorax. In this group of species there exists a very remarkable character, inasmuch as a large area at the base of the thorax is delimited by a line of excessively minute dense sculpture; this line is extremely indistinct in the allied species, but is clearly perceptible with a good Coddington lens in *E. sublævis*. (In the genus *Phalacrichus* this peculiarity of sculpture becomes much exaggerated.) The sculpture of the head and upper surface is much more effaced in *E. sublævis* than it is in *E. læticulus* and *E. optatus*. Three specimens.

3. **Eulimnichus læticulus,** sp. n.

Ovalis, elongatus, niger, fere subænescens, nitidus, parce punctatus, subtiliter pubescens; prothoracis angulis anterioribus haud spinosis.
Long. 2 millim.

Hab. MEXICO, near the city (*Flohr*); GUATEMALA, Paso Antonio, San Gerónimo (*Champion*).

This species is allied to *Limnichus montanus*, Lec., the intervals between the remote punctures being occupied by an extremely fine reticulation of a somewhat hexagonal shape, as described by Casey; besides this, the punctures are not sharply defined, obscure creases proceeding from them, so that the surface is somewhat coriaceous, not at all polished. Although the front angles of the thorax are not spinose, yet they are (viewed from beneath) well-marked and almost rectangular, and just perceptibly prominent. The under surface, legs, and antennæ are intensely black. The posterior coxal plates bear deep punctures, but are not impressed in a sulcate manner. The scutellum is elongate and narrow. Four specimens.

4. **Eulimnichus optatus,** sp. n.

Ovalis, niger, fere subænescens, nitidus, parce punctatus, subtiliter pubescens ; prothoracis angulis anteiioribus brevissime spinosis.

Long. vix 2 millim.

Hab. Mexico, Cuernavaca (*Flohr*), Tupataro (*Höge*) ; Guatemala, near the city, San Gerónimo (*Champion*).

Closely allied to *E. læticulus*, but slightly less elongate, and with the surface more polished ; besides this, the front angles of the thorax are certainly, though most minutely, spinose. *E. optatus* is also very similar to a New Mexican species sent me by Mr. Wickham, and which I believe to be *E. perpolitus*, Casey. Ten specimens: the two from Guatemala do not quite agree with the types, which were sent me by Mr. Flohr ; those from Tupataro are also a variety.

5. **Eulimnichus plebeius,** sp. n.

Ovalis, sat latus, niger, breviter squamosus, minus variegatus, antennis rufis ; subtiliter punctatus, haud nitidus, punctatura basin versus obsoleta, apicem versus discreta ; prothoracis angulis anterioribus haud spinosis.

Long. 2–2$\frac{1}{4}$ millim.

Hab. Mexico, Cuernavaca (*Flohr*) ; Guatemala (*Sallé*), San Gerónimo (*Champion*).

One of the most commonplace and unattractive species ; slightly larger than *Limnichus versicolor*, Waltl, which it superficially much resembles. The antennæ are quite short, the two or three penultimate joints distinctly transverse ; they are dull reddish or black in colour. The sides of the thorax are less depressed than usual, standing out a little more. The scutellum is elongate. The punctuation of the elytra behind is dense and fine, at the base more effaced. The clothing consists of short scale-like depressed hairs, chiefly of a flavescent colour, and indefinitely variegated with white. Viewed from beneath, the prothoracic anterior angles are seen to be very obtuse, though just perceptibly free. The prosternal groove is broad, but not very deep ; and the mesosternum is slightly sulcate, so that there is in some lights an appearance of the channel extending from near the front of the prosternum to near the apex of the metasternum. The abdominal punctuation is extremely fine. There is an indistinct transverse channel on the coxal plates of the hind legs. Ten specimens.

6. **Eulimnichus analis.**

Limnichus analis, Lec. Bull. U.S. Geol. & Geogr. Surv. v. p. 515 (1879) [1].

Limnichus (*Eulimnichus*) *analis,* Casey, Ann. N. York Acad. v. p. 148 [2].

Hab. North America, Texas, Arizona [2], California [1 2].—Mexico, Yautepec (*Flohr*), Teapa (*H. H. Smith*) ; Panama, Tolé (*Champion*).

The four specimens I refer to this species come from three localities, and are far from agreeing among themselves ; but they approach so closely to an example of

E. analis from Arizona, sent me by Captain Casey, that I think it quite likely they are merely varieties of it. The most distinct is the specimen from Yautepec given me by Flohr, which has the surface more deeply and coarsely punctured.

7. **Eulimnichus sordidus,** sp. n.

Breviter ovalis, sat convexus, niger, setositate fulva albaque minus discrete variegatus, obsolete punctatus; prothoracis angulis anterioribus breviter bispinosis.
Long. 2 millim.

Hab. GUATEMALA, near the city (*Champion*).

Though closely allied to *E. analis*, this species is of shorter form and has more obsolete and scanty punctuation. The breadth just surpasses 1 millim. The setosity of the upper surface is rather dark tawny, but there is some white mixed with it, not forming, however, definite spots. The punctuation is not very definite, even on the apical half of the elytra, and is very indistinct at the base. The anterior angles of the thorax form a very acute short spine. There is no sulcus on the lamina of the posterior coxa. Nine specimens.

8. **Eulimnichus guatemalicus,** sp. n.

Breviter ovalis, niger, supra pube grisescente (parum flavescente) maculatim vestitus, crebre, subtiliter, fere æqualiter punctatus, haud nitidus; prothoracis angulis anterioribus muticis.
Long. 2, lat. $1\frac{1}{8}$ millim.

Hab. GUATEMALA, Panzos, Coban (*Conradt*).

This insect can only be confounded with *E. sordidus*, from which it is distinguished on the upperside by the denser, more definite punctuation. The pubescence is fine and not scale-like, and, though very "spotty," is less variegate in colour than in the other large species, the tendency to tawny colour being very slight. The anterior angles of the thorax are not in the least free. The pubescence beneath is fine and evenly distributed. There is no trace of a groove on the posterior coxal plates, though seen from in front the hind margin seems to be very slightly raised.

We have received two specimens only of this species, but there can be no doubt that it is quite distinct. Mr. Champion found, however, at Guatemala city a single example of a form closely allied to *E. guatemalicus*, being considerably smaller and with the punctuation more effaced.

9. **Eulimnichus confertus,** sp. n.

Oblongo-ovalis, sat convexus, nigricans, densissime fortiter punctatus, pube fulvescente maculatim vestitus; prothoracis angulis anterioribus spinosis.
Long. $1\frac{1}{2}$ millim.

Hab. MEXICO, Atoyac (*H. H. Smith*), Cuernavaca (*Flohr*); GUATEMALA, near the city (*Champion*).

Distinguished from all the other species of the genus, except the following, by the densely-packed definite punctures of the upper and under surfaces. It is clothed above with a rather scanty, fine, grey and flavescent setosity, giving rise to a faintly spotted appearance. The thoracic angles form a very definite slender spine, and there is even a second excessively minute spine on the front margin, where the prothoracic flank joins the prosternum: very careful examination is required for the detection of this second prominence. The prosternal groove is broad and deep, and the mesosternal cavity leaves only a slender margin behind it between the middle coxæ.

Mr. Champion secured a good series of this insect, which apparently varies but little. The specimens from Teapa and Cuernavaca seem to belong to the same species. An example sent from Motzorongo by Flohr indicates apparently a nearly allied form, the punctuation being less crowded; this individual is, however, in a very bad state of preservation.

10. **Eulimnichus admirandus,** sp. n. (Tab. XX. figg. 1; 1 *a*, sculpture of elytra.)

Suboblongus, opacus, omnium densissime fortiter punctatus, setositate brevissima vestitus, subvariegatus. Long. vix $1\frac{1}{2}$ millim.

Hab. Mexico, Teapa (*H. H. Smith*).

Few insects have as remarkable a punctuation as *E. admirandus*, the large deep punctures being so closely packed that the interstices are reduced as far as is possible, consistent with leaving each one distinct. The surface has a somewhat file-like appearance, owing to the interstices being so fine. The clothing consists of excessively short, suberect, truncate setæ, and the surface is slightly variegated by them; they are chiefly tawny, but some groups are more pallid, so that a slight spotty effect is produced.

We have only one specimen of this species; it is in perfect condition, and as the insect cannot be confounded with anything else, I have not taken it off the card to see the under surface. *E. admirandus* bears some resemblance to the small narrow examples of *E. confertus*, but it is much more oblong in form, the punctures are more crowded, and are as well developed on the disc of the thorax as elsewhere.

LIMNICHODERUS.

Limnichus, subgen. *Limnichoderus*, Casey, Ann. New York Acad. v. p. 146 (1890).

I refer two species allied to the European *Limnichus* to this group of Captain Casey's. These agree with *Limnichus*, but have a sulcate prosternum; the genus, therefore, bears the same relation to *Limnichus* that *Eulimnichus* does to *Pelobates*. *Limnichoderus* includes five North-American species.

1. **Limnichoderus curtulus,** sp. n.

Breviter ovalis, posterius acuminatus, nigricans, subtus rufescens, pedibus flavis; tomento minuto griseo undique vestitus, minutissime punctulatus, punctis majoribus adspersis perparum conspicuis.
Long. $1\frac{1}{4}$, lat. vix 1 millim.

Hab. PANAMA, Caldera in Chiriqui, San Miguel in the Pearl Islands (*Champion*).

Very like the European *Limnichus sericeus* in clothing and sculpture, but much smaller, of different outline, and on the under surface very distinct. I am not able to see the antennæ. The thorax is very short, the sides straight, but strongly convergent in front. The sculpture of the elytra is very difficult to see on account of the fine matted pubescence, but it consists of extremely minute punctures, and other much larger, though still very fine, remote punctures scattered over the surface. The whole of the under surface is red, the tibiæ paler. The prosternum is short. Two specimens.

2. **Limnichoderus indiscretus,** sp. n.

Breviter ovalis, posterius acuminatus, nigricans, subtus rufescens, antennis pedibusque testaceis; subtilissime griseo-pubescens, subnitidus, punctis adspersis parum conspicuis.
Long. $1\frac{1}{2}$ millim.

Hab. GUATEMALA, Dueñas (*Champion*).

Closely allied to *L. curtulus*, but rather larger, with the surface less densely clothed with tomentum, so that it is a little shining; the scattered punctures on the elytra are considerably larger. I have seen the antenna in this species; it is of the same type of structure as that of *Limnichus sericeus*, the third joint being thick, about as long as broad, and from this to the sixth joint each becomes more slender, so that the sixth is narrower than either of the contiguous joints, being about two or three times as long as broad. Two specimens.

I possess a specimen from Castelnau's collection of a species closely allied to *L. indiscretus*, labelled "*Ersachus americanus*, Dej. Texas." It may possibly be *Limnichus ovatus*, Lec., but this is very doubtful, as I interpret Casey's description of that species as indicating that the angles of the thorax are spinose.

PHALACRICHUS, gen. nov.

Antennæ tenues, fragiles; clava laxissime articulata. Prosternum sulcatum.

Allied to *Eulimnichus*, but with very different antennæ, the mentum and ligula smaller and less horny, and the terminal joints of the palpi larger. The colour and clothing of the body are quite different, the pubescence being fine, short, and erect, and the facies somewhat recalls that of the Phalacridæ. There is a peculiar transverse seriate punctuation on the thorax. The arrangements for the contraction of the head and legs seem to be much the same as they are in *Eulimnichus*. In facies, *Phalacrichus* appears to a certain extent to connect the forms allied to *Limnichus* with the

new and aberrant genera I have called *Cyphonichus* and *Euthryptus*, but is distinguished from them by the sulcate prosternum. I do not think it is the same as *Lichminus*, Casey, though I am not quite sure about this. The insects seem to be very rare, and I can only set forth their characters at present in this imperfect manner.

1. **Phalacrichus atomarius,** sp. n. (Tab. XX. figg. 2; 2 *a*, punctures at base of thorax.)

Ovalis, convexus, piceus, antennis pedibusque flavis, sat nitidus, pube subtili subdepressa parum dense vestitus, parce subtiliter punctatus.
Long. 2 millim.

Hab. Mexico, Frontera in Tabasco (*Höge*).

This species has somewhat the appearance of a large *Atomaria*. It bears on the upper surface a rather scanty clothing of fine pallid hairs, which are directed backwards, but stand up quite free from the surface; the punctures are moderately large, but shallow. The antennæ are yellow, very pale (and the mouth-parts are of the same colour); the first two joints are very thick, 3 to 8 slender, 9, 10, 11 slender and elongate, but nevertheless distinctly differentiated from the preceding joints, each of them oval, considerably longer than broad, and so loosely connected that they separate with very little manipulation; they are pubescent, and bear numerous longer fine hairs. In addition to the diffuse punctuation, the thorax has a series of closely-placed shallow punctures forming a transverse row about one-third of the length from the base to the front, and on each side turning back to the base at an obtuse angle. The punctuation of the under surface is excessively fine, the thoracic segments smooth and shining along the middle.

CYPHONICHUS, gen. nov.

Antennæ fragiles, setosæ, haud clavatæ; articulo secundo brevi, crasso. Prosternum haud sulcatum.

The species of this genus have lost the facies characteristic of *Limnichus*, and more resemble *Cyphon*. The head is only imperfectly drawn into the thorax in repose, the parts of the mouth being closely applied to the front of the prosternum. The arrangements for packing away the retracted legs are the same as in the normal *Limnichi*.

This genus occurs in Asia. (*Cf.* Ent. Monthly Mag. xxxviii. p. 61.)

1. **Cyphonichus panamensis,** sp. n.

Ovalis, sat convexus, rufo-brunneus, antennis, pedibus partibusque oris pallide flavis, pube gracili suberecta vestitus, parce punctatus, elytris seriebus punctorum majorum brevissimis.
Long. $2\frac{1}{8}$ millim.

Hab. Panama, Bugaba, San Miguel in the Pearl Islands (*Champion*).

This species is readily distinguished from the others having abbreviated series of large punctures on the elytra by its smaller size. We have only two specimens, and they are in a bad state of preservation, so that the condition of the pubescence cannot very well be made out, but it appears to be more scanty and less upright than in the other forms, except *C. olibroides*. The antennæ are extremely slender and fragile, not at all clavate, the terminal joint not being larger than the preceding one. The surface is shining, the punctuation being scanty and excessively fine. The elytra, also, are extremely finely punctate, but there are four very abbreviated series of large punctures on the basal part, nearer to the suture than to the outside; these series are irregular, the punctures not being of equal size nor quite symmetrically placed. The under surface, except along the middle of the thoracic segments, is made dull by extremely minute punctuation and pubescence. Two specimens.

2. **Cyphonichus olibroides,** sp. n.

Ovalis, subdepressus, ferrugineus, antennis pallidis, sordide testaceis; subtiliter parce punctatus et pubescens. Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

Distinguished from its allies by the more pallid colour, comparatively depressed form, and the diminished punctuation and pubescence, there being almost no secondary—*i. e.* larger—punctures on the elytra. The antennæ are extremely slender and fragile, filiform, but with the terminal joint distinctly larger than the tenth. The thoracic punctuation is extremely fine; the punctures on the elytra are fine and rather numerous, and careful observation shows that one or two rather larger impressions on the disc of each elytron exist to represent the serial punctures that are found in the other species of the genus. The under surface is pale red and dull, being extremely densely and finely punctured and minutely pubescent, except along the middle of the sterna. I have hesitated as to whether the two examples on which I describe the species may be immature individuals of the following one, but I do not think this is the case.

3. **Cyphonichus celatus,** sp. n.

Ovalis, parum convexus, niger, pube nigro-fusca subtili subdepressa vestitus, antennis pedibusque testaceis, femoribus fuscis; elytris crebre punctulatis, seriebus valde abbreviatis, duabus vel tribus, perparum conspicuis punctorum majorum.
Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Paso Antonio (*Champion*).

This insect is of a slightly narrower oval form than *C. olibroides*, and, besides differing strongly in colour, has the punctuation and pubescence of the elytra more distinct; the serial punctures are but small, fine, and few, and this character distinguishes *C. celatus* from the following species. One specimen.

4. **Cyphonichus mollis,** sp. n.

Ovalis, subdepressus, piceus, anterius fere omnino niger, pube fusca subtili parum elongata vestitus ; antennis pedibusque testaceis ; elytris parce punctatis, singulo ante medium seriebus nonnullis punctorum, valde abbreviatis.

Long. $2\frac{1}{2}$ millim.

Hab. GUATEMALA, Torola 1000 feet (*Champion*).

The series of larger punctures are four in number on each wing-case, and though greatly abbreviated are very distinct. The pubescence is short and very fine. The form is short-oval, but little pointed behind: this character and the shorter antennæ readily distinguish *C. mollis* from *C. vestitus*. One specimen.

5. **Cyphonichus vestitus,** sp. n. (Tab. XX. fig. 3.)

Ovalis, parum convexus, nigricans, antennis pedibusque testaceis, subtiliter punctatus, pube sat elongata suberecta dense vestitus ; elytris seriebus punctorum majorum abbreviatis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, San Gerónimo (*Champion*).

Rather elongate-oval, considerably narrowed behind, blackish, the elytra being black and the abdomen more rufescent than the rest of the body. The pubescence is of a dark fuscous colour, abundant and conspicuous; the punctuation on the thorax is scarcely evident, and on the elytra is scanty and fine, there being four or five series of larger punctures on each, reaching halfway, or less, towards the apex. On the under surface there is a very fine pubescence, which renders the surface dull.

Described from eight specimens found at San Gerónimo. Two Mexican examples are rather smaller, and exhibit slight distinctions in the sculpture, but I hesitate to treat them as distinct while we have so little evidence as to the variation of these closely allied forms.

6. **Cyphonichus misellus,** sp. n.

Ovalis, minus angustus, sat convexus, fusco-niger, antennis testaceis, pedibus rufis; pube elongata dense vestitus; elytris seriebus punctorum majorum abbreviatis.

Long. 3 millim.

Hab. MEXICO, Cuernavaca (*H. H. Smith*).

In this insect the serial punctures of the elytra are conspicuous and less abbreviate than in most of the other members of the genus, and extend from the suture outwards; the series along the suture, though consisting of remote punctures, can be traced for the greater part of the length of the elytra; the minute diffuse punctuation is less than in most of the other species, and all the sculpture is much concealed by the largely developed pubescence.

Though we have only one specimen, I think it represents a distinct species from

C. vestitus, being of much shorter and more rounded outline. From the forms placed before *C. vestitus* it can be recognized by the greater development of the serial punctuation.

EUTHRYPTUS, gen. nov.

Antennæ fragiles, haud clavatæ; articulo secundo elongato, leviter curvato. Prosternum haud sulcatum. Corpus setosum.

I establish this genus for two somewhat discordant species, distinguished from *Cyphonichus* by the fact that the second joint of the antenna is elongate, somewhat flattened, and slightly curved, so that the joint is adapted to the curvature of the eye when the antenna is retracted. The prosternum is not very elongate, and the head appears to be less perfectly retractile than in the normal Limnichinæ. I think it is highly probable that the antennæ remain outside the body when the head is retracted, and do not enter the cavity of the thorax. The arrangements for packing away the legs are as perfect as in the other forms of the subfamily. The two species are probably very rare insects. The characters are drawn from each of them, but *E. trigonalis* may be taken as the type when the genus comes to be divided.

1. **Euthryptus orbiculatus,** sp. n. (Tab. XX. fig. 4.)

Subhemisphæricus, nigricans, pube elongata erecta vestitus, antennarum basi pedibusque piceis; sat nitidus, elytris seriatim punctatis, punctis externis magnis et profundis.

Long. 3 millim.

Hab. GUATEMALA, Las Mercedes (*Champion*).

The convex rotund form and the copious erect pubescence make this species very distinct from all its known allies. The pubescence is somewhat varied in colour, but has, in certain lights, a distinct flavescent or even golden appearance, and is somewhat irregularly arranged so as to give a slight variegation of colour, as is so common in the *Limnichi*. The antennæ are very fragile, strongly setose, not clavate, but with the terminal joint a good deal larger than the penultimate. The punctuation of the thorax is very fine, and the surface is shining between the hairs. On the dorsum of the elytra the punctuation is obscure, but becomes more definite at the sides, so that the external series consist of very large and deep punctures. The punctuation of the under surface is strongly marked and deep, but rather fine. Three specimens.

2. **Euthryptus trigonalis,** sp. n. (Tab. XX. fig. 5.)

Ovalis, sat convexus, nigricans, pube subaurea variegata minus dense vestitus; antennis elongatis, basi picea; elytris fortiter et profunde punctatis.

Long. $3\frac{1}{2}$ millim.

Hab. GUATEMALA, Paraiso (*Champion*).

This remarkable and very distinct species is represented by a single example. Though it has entirely lost its legs, the insect is otherwise in a good state of preservation, and I have no hesitation in describing it *. The antennæ are longer than in any other described species of the subfamily; they are very fragile, slightly thicker towards the extremity, setose, the terminal joint subacuminate, twice as long as broad. The head bears on each side a longitudinal groove running backwards from the front of the eye, and diverging from the eye so as to mark off a triangle limited by it, the side of the eye, and the anterior margin of the thorax. The eye is margined supero-internally. The thorax is greatly narrowed to the front, extremely closely connected with the after-body, the outline of the two being perfectly continuous; it is covered with fine, moderately numerous punctures, which would be very definite were it not for the hair. The punctures of the elytra are large and deep, very numerous, and arranged in an irregularly seriate fashion.

ERSACHUS.

Ersachus, Erichson, Ins. Deutschl. iii. p. 497 (1848).

This genus was established by Erichson in a brief note, and since then seems to have entirely dropped. Lacordaire's description is merely an extract from Erichson, and I have not found any further reference to *Ersachus*, nor have I ever seen any specimens in collections. If I am right in identifying the following species as belonging to *Ersachus*, Erichson was wrong in placing it in Limnichinæ, the species having none of the characters of that subfamily. The correct position appears to be near *Elmis*, in the Parnidæ.

1. **Ersachus erichsonianus**, sp. n. (Tab. XX. fig. 6.)

Brunneus, pube minutissima plumbea maculatim vestitus, antennis pedibusque testaceis; sub pube, irregulariter sat fortiter punctatus.

Long. 3, lat. $1\frac{1}{2}$ millim.

Hab. Mexico, Jalapa (*Flohr*); Guatemala, San Gerónimo (*Champion*); Panama, Caldera (*Champion*).

Basal two joints of the antennæ thick, third very slender, 9–11 forming a slender feebly-differentiated club. Eyes very convex. Thorax short, very closely and perfectly applied to the base of the elytra, which is clasped by the attenuate hind angles; abruptly narrowed to the front, and with the surface uneven, so that the back of the head is clasped by the middle of the front of the thorax. Scutellum almost equilaterally triangular, densely clothed with minute plumbeous or silvery pile. Elytra variegated with spots of a similar pile. Under surface entirely covered with this minute down.

* An allied form from Borneo in my collection, recently described by me under the name *Caccothryptus compactus* (Ent. Monthly Mag. xxxviii. p. 63), has longer antennæ than *E. trigonalis*.

I do not think this is the *Ersachus* described by Erichson; all that he says about his species is "rufo-piceus, pube brevissima densa maculatim aureo cinereoque variegatus; elytris punctatis. Long. $1\frac{1}{2}$ lin. Von Moritz in Columbien entdeckt."

2. **Ersachus lugubris,** sp. n.

Minus latus, niger, pube grisea maculatim vestitus, antennis pedibusque testaceis; parce, irregulariter punctatus.
Long. $2\frac{1}{2}$, lat. 1 millim.

Hab. GUATEMALA, Cerro Zunil (*Champion*).

Closely allied to *E. erichsonianus*, but distinguishable by the blacker colour and narrower form. The specimens—four in number—are in a very bad state of preservation, but I have little doubt as to the distinctness of the species.

3. **Ersachus mexicanus,** sp. n.

Brevis, rufescens, tomento minutissimo griseo maculatim vestitus, antennis pedibusque testaceis; prothorace medio supra caput valde gibboso.
Long. capite extenso 2, lat. $1\frac{1}{10}$ millim.

Hab. MEXICO, Atoyac in Vera Cruz (*H. H. Smith*).

Very similar to *E. erichsonianus*, but of shorter form, and separable therefrom by the great gibbosity of the middle of the prothorax, which seen from the front forms a sort of knob, which is very densely punctate. One specimen.

Subfam. *CHELONARIINÆ.*

The position of the curious beetles that form the genus *Chelonarium* is by no means clear. Erichson did not allude to the genus in his notice of the Byrrhidæ in the third volume of the 'Insecten Deutschlands,' from which we may infer that he did not consider it to belong to this family. By the early authors *Chelonarium* was placed in Throscidæ. In the Munich Catalogue it is placed in Byrrhidæ, but on what grounds I do not know. It appears to me to be more allied to Dascillidæ than to any other Coleoptera. The limits of the families Byrrhidæ, Parnidæ, and Dascillidæ are at present merely conventional, and as they will probably be united, it is not necessary to further discuss the position of *Chelonarium*.

CHELONARIUM.

Chelonarium, Fabricius, Syst. Eleuth. i. p. 101 (1801).

This genus consists of about twenty-five species, most of which are found in the tropical regions of the New World. A few forms are recorded from the Eastern Hemisphere, but I have never seen any of them. These insects are most difficult to study. No structural characters are available for their discrimination, and it is necessary to rely on the slight peculiarities afforded by shape, size, and the nature of the surface. The

species have hitherto been very inadequately described, and their recognition is at present little better than guesswork.

The punctuation of the elytra is of great importance. If one of the species having little clothing be examined, it will be seen that the punctuation is formed by double punctures, a comparatively large circular depression and a very small one near it; the distance between the pair varies according to the species, but the position is always similar, viz., the larger puncture behind, and in front of it the very minute one; the latter always bears the seta. Towards the tip of the elytra the large punctures are larger and the arrangement becomes confused. In the species that bear a clothing of white hairs, in addition to the setæ, the arrangement of the punctuation is less regular; the surface becomes more or less dull in consequence of reticulation and unevenness, and the patches of white hair arise from groups of very minute punctures. The more polished species can readily be recognized by peculiarities of the sculpture and setæ; but those bearing patches of white clothing cannot at present be satisfactorily limited.

I have failed to find any reliable external signs of the sex.

In the following diagnoses the length is measured from the front of the thorax to the tip of the elytra.

1. Chelonarium mexicanum.

? *Chelonarium mexicanum*, Castelnau, in Silbermann's Rev. Ent. iii. p. 178 (1835); Chevrolat, Le Naturaliste, ii. p. 260 (August 1880).

Hab. Mexico, Cerro de Plumas (*Höge*), Toxpam, Cordova, Playa Vicente, Tuxtla, Orizaba (*Sallé*).

Var. *longulum*, var. n. Nigrum, politum, elongatum. Long. $5\frac{1}{2}$–$7\frac{3}{4}$ millim.

Hab. Panama, Bugaba, Volcan de Chiriqui (*Champion*).

Var. *mexicanum*, i. sp.

Brevius, rufo-piceum, pectore piceo; punctatura et setositate minimis. Long. 6 millim.

Hab. Guatemala, Yzabal (*Sallé*).

Var. *chontalense*, var. n. Brevius, nigrum, setositate perparva. Long. 6 millim.

Hab. Nicaragua, Chontales (*Belt, in coll. Sharp*).

I refer to this species all those specimens that have the surface quite polished, sparingly punctate, and apparently destitute of any clothing. On examination it is seen, however, that each puncture bears an extremely minute seta only about as long as the diameter of the puncture. All the other forms found in our region have a distinct clothing, consisting of comparatively long fine hairs, which in the case of some of them are scanty in number. In *C. mexicanum*, however, the elytral punctures are not geminate. As thus limited, the present species exhibits considerable variation,

the colour becoming sometimes piceous instead of black. I am not sure, indeed, that there may not be two or three very closely allied forms amongst our specimens. The two most distinct are those I have named *mexicanum* and *chontalense*. The three specimens from Panama are very elongate, and have the punctuation somewhat effaced; but they approach so nearly to some of the examples from Cerro de Plumas that I cannot at present consider them distinct.

It is quite doubtful whether this is Castelnau's species; all he says is as follows:—"Brun obscur, couvert d'une pubescence grise, finement ponctué; corselet demi-orbiculaire, très relevé en avant, guilloché au bord postérieur; dessous du corps d'un brun rouge. Mexique. Long. $2\frac{1}{2}$ lig., lat. $1\frac{1}{2}$ lig."

This does not appear to point to our insect, which is the most glabrous of the genus; possibly it may have been taken from the var. *mexicanum*, though I think this extremely uncertain. All the specimens named *C. mexicanum* in Sallé's collection belong to this species, which is probably the form intended by Chevrolat. Under these circumstances I am not prepared to assign the name "*mexicanum*" to any other of our forms. The matter must remain uncertain until Castelnau's type can be examined *.

2. **Chelonarium zapotense,** sp. n. (Tab. XX. figg. 7; 7 *a*, punctures of elytra.)

Ovale, sat nitidum, ferrugineum vel piceum, parce subtiliter punctatum; elytris setis distantibus, elongatis, depressis vestitis; puncto singulo geminato, e puncto minuto et puncto minimo composito.

Long. $5\frac{1}{2}$–$6\frac{1}{2}$, lat. 3–$3\frac{1}{4}$ millim.

Hab. MEXICO, Ventanas (*Forrer*), Tuxtla, Playa Vicente, Panistlahuaca (*Sallé*), Cerro de Plumas, Jalapa, Tapachula (*Höge*); GUATEMALA, Zapote, San Gerónimo, Panzos (*Champion*).

Easily recognizable by the scanty, depressed, fine hairs on the elytra, each hair being about as long as the interval between the punctures; the punctures are extremely fine, and when highly magnified each one is seen to consist of a small puncture and a second extremely minute puncture imperfectly separated from the larger one. (In some allied species the two punctures are separated, but remain a pair.) The head is coarsely and densely punctured. The thorax has a rather broad band of punctuation round the front part, the disc is only very scantily and obsoletely punctured, and the setæ in the punctures are so minute that they can only be detected under a high power. The punctuation of the under surface is not dense, and the setæ are very short, though quite visible. Thirty-four specimens.

One individual from Zapote is of much narrower form, resembling in this respect *C. succinctum*; it may represent a distinct species.

* Some of Castelnau's specimens of *Chelonarium* came into my possession many years ago; amongst them is an individual labelled "*C. mexicanum*, Dej., Mexico." This is certainly not the type, and also does not agree with the description; it appears to be nearer to *C. errans*. If the examples in Dejean's collection can be found, they may throw some light on the subject.

3. **Chelonarium hyphydroide,** sp. n.

Ovale, minus elongatum, parum punctatum, politum, nigricans vel piceum; elytris ad apicem setis depressis parum numerosis, ante apicem fascia transversa albido-tomentosa.
Long. $4\frac{1}{2}$–$5\frac{1}{2}$ millim.

Hab. PANAMA, Bugaba (*Champion*).

One of the smallest of our species, and of less elongate form than usual, and with the punctuation and clothing much reduced. The antennæ are moderately long, in repose only just falling short of the hind margin of the metasternum. The head has a more or less extensive irregular space along the middle free from punctures. The thorax is highly polished, the front margin is but little reflexed, and the punctuation is obsolete in the hollow, and absent on the elevated, portion, and the setæ in the punctures are excessively minute. There are some white hairs on the scutellum. The punctuation on the parts of the elytra anterior to the white band is extremely fine and distant, and the hairs proceeding from the punctures very small; on examination under a microscope it is seen that, on the front parts, each puncture really consists of two fine approximate punctures placed longitudinally, the fine seta proceeding from the anterior one of the pair. The white postmedian band varies in size and is sometimes reduced to a few hairs; behind it, the setæ are more distinct than those at the base, but though long they are very distant, and the sculpture is extremely fine. The punctuation of the under surface is much reduced, the ventral segments being almost smooth on a broad space along the middle; the plates of the hind coxæ are only finely punctate, shining, and there is but little punctuation on the metasternum. Eighteen specimens.

4. **Chelonarium errans,** sp. n.

Ovale, elongatum, parum punctatum, nigricans vel piceum; elytris ad apicem setis depressis elongatis, parum numerosis, ante apicem fascia transversa albido-tomentosa.
Long. $5\frac{1}{2}$–6 millim.

Hab. GUATEMALA, Zapote (*Champion*); PANAMA, Volcan de Chiriqui below 4000 feet (*Champion*).

This species is very closely allied to *C. hyphydroide*, but is of more elongate form, and is easily distinguished by the greater length of the setæ, a character which becomes very marked on the apical part of the elytra. The setæ are also yellower in colour, the surface is rather less polished, and the punctuation of the under surface is not quite so obsolete. Thirty-three specimens. There is little or no difference between the individuals from Chiriqui and those from Guatemala.

5. **Chelonarium chiriquense,** sp. n.

Ovale, rufescens; elytris parce setosis, guttisque albidis hic inde sparsis, ante apicem in fasciam transversam imperfecte aggregatis; corpore subtus modice punctato; antennis parvis.
Long. 5–$5\frac{1}{2}$ millim.

Hab. Panama, Volcan de Chiriqui below 4000 feet (*Champion*).

This species to a considerable extent connects the *C. hyphydroide*-forms with the *C. succinctum*-forms. The white pubescence is not sufficiently diffuse to give a grey appearance to the wing-cases, but forms small spots, giving rise to a pretty flecked appearance. The surface is polished as in *C. hyphydroide*, and the under surface is punctate in a manner intermediate between that of *C. hyphydroide* and that of *C. succinctum*. The antennæ are about $1\frac{1}{2}$ millim. long. There is much punctuation along the front margin of the thorax, and a deep depression there, not extending to the base; this depression is in some specimens separated into two by an obscure elevation of the middle; there is but little setosity on the elevated disc. The setosity of the elytra is rather scanty, but definite, and does not very much conceal the shining surface. The punctuation of the under surface is not dense or coarse along the middle, and there is not a great deal of punctuation on the metasternum. Four specimens. One of them is a variety of shorter, more oblong form, with the white spots not united into a fascia.

6. **Chelonarium succinctum.**

Chelonarium succinctum, Chevrolat, Le Naturaliste, ii. p. 260 (August 1880) [1].

Hab. Mexico, Teapa (*Pilate* [1], *Sallé*); Guatemala, Panzos (*Champion*).

This is an oval species, variegated on the elytra with much white hair, but with little tawny setosity. It is readily distinguished from *C. scabrosum* by the small antennæ, only about $1\frac{1}{2}$ millim. long. *C. gravidum* has also short antennæ, but is a rather larger insect, of more oblong form, with very dense punctuation of the under surface.

Of four specimens named *C. succinctum* in Sallé's collection, three are perhaps this species, the other being *C. gravidum*. Chevrolat's description is very poor, and as it is contained in a work not easily procurable, we here reproduce it:—"Long. 6 mil., lat. 3 mil. Elongato-oblongum, nigro-brunneum, nitidum, dense et minutissime striatum et breviter pubescens, fascia postica arcuata alba; prothorace semiarcuato, lateribus valde reflexo, intra canaliculato, basi crenato, supra scutellum truncato, nigro-brunneo nitido, dense minuteque punctato; scutello subtriangulari plano; elytris ovalibus convexis, versus medium latioribus, minute punctulatis, breviter griseo-pubescentibus, fascia obliqua alba ante apicem ad marginem ducta; corpore infra punctulato, rubido. Teapa, 2 ex. a D. L. Pilate datum."

With regard to this and all the following species, I may remark that I have not seen a sufficient number of specimens to justify me in forming any positive opinion about them.

7. **Chelonarium scabrosum,** sp. n.

Oblongo-ovale, piceum vel rufescens; elytris pube variegata e setis albidis et fulvis composita, ante apicem fascia irregulari albida; abdomine densissime scabroso-punctato; antennis elongatis.
Long. $5\frac{1}{2}$–7 millim.

Hab. MEXICO, Tuxtla (*Sallé*), Cerro de Plumas, Tapachula (*Höge*); GUATEMALA, Zapote, San Isidro (*Champion*).

Very similar to *C. succinctum*, but with the antennæ much longer (almost 3 millim. long), and the abdominal punctuation remarkably dense, coarse, and rough. It is rather straighter at the sides, and therefore more oblong in form. There is a very evident setosity scattered all over the thorax, and a broad band of punctuation round the margins. The setosity of the elytra consists of a preapical irregular white band (very variable) and rather numerous white flecks elsewhere, and also of many tawny setæ. When the pubescence is removed, the surface is seen to be dull and the sculpture much effaced. The metasternum is punctured all over. Nine specimens.

8. **Chelonarium gravidum,** sp. n.

Oblongo-ovale, nigricans, elytris copiose albido-setosis, ante apicem guttis irregularis quasi fasciam formantibus; abdomine fortiter denseque punctato; antennis parvis.
Long. 7 millim.

Hab. MEXICO, Acapulco, Tapachula (*Höge*).

One of the largest and apparently darkest in colour of the white-clothed species of *Chelonarium*. Notwithstanding its large size, the antennæ are scarcely 2 millim. long. Except for this, some of the specimens would be with difficulty separable from certain varieties of *C. scabrosum*. The punctuation of the ventral segments is extremely dense and confluent, so as to give rise to a very rough appearance, except along the middle of the basal two or three. Three specimens.

I have referred to this species, as probably varieties, five specimens of smaller size, 5–$5\frac{3}{4}$ millim. long. Four of them are from Guatemala (Teleman and San Juan), the fifth from Mexico (Cerro de Plumas).

9. **Chelonarium prolixum,** sp. n.

Oblongo-ovale, elongatum, rufescens, sat nitidum, parce setosum et punctatum; elytris guttis albidis, parum discretis, hinc inde sparsis; corpore subtus dense fortiterque punctato, opaco.
Long. 7, lat. 3 millim.

Hab. MEXICO, Cerro de Plumas (*Höge*).

This is comparatively the most elongate, narrow, and parallel of the species. We have only one specimen and the antennæ are imperfect; they appear to be slightly shorter than in *C. scabrosum*, but considerably longer than in *C. gravidum*. The definite sculpture of the elytra is more like that of the species of the *C. mexicanum*-group than that of the *C. succinctum*-group; the surface is polished, sprinkled with

short fine setæ, and here and there with patches, each formed by a few white hairs; the punctuation is definitely geminate, there being a distinct circular puncture accompanied by a small setigerous one. There is a great deal of coarse punctuation along the front of the thorax, and a moderately long scanty setosity on the surface. The punctuation of the under surface is dense and coarse, like that of *C. scabrosum*.

10. **Chelonarium ducale,** sp. n.

Oblongo-ovale, fuscum; elytris albido-maculatis, subtiliter setosis, maculis ante apicem in fasciam latam quasi aggregatis; antennis elongatis.

Long. 8, lat. $3\frac{3}{4}$ millim.

Hab. GUATEMALA, near the city 5000 feet (*Salvin*), Dueñas (*Champion*).

Closely allied to *C. scabrosum*, rather larger, and with the surface more shining, and when the clothing is removed more definitely punctured. The thoracic setæ are less developed than in *C. scabrosum*, and the abdominal punctuation is not quite so dense along the middle. There is much coarse punctuation along the margins of the thorax. The white flecks on the elytra are extensive; the others are rather long, fine, and evenly distributed; when the clothing is removed the surface is shining. Two specimens.

THE CENTRAL-AMERICAN RHIPIDANDRI*.

Leconte, in the first edition (1862) of the Classification of N.-American Coleoptera, p. 236, proposed a group, "Rhipidandri," in the family Tenebrionidæ, for a small beetle of the United States (*Xyletinus flabellicornis*, Sturm). In the second edition of this work (1883), p. 232, he transferred *Rhipidandrus* from Tenebrionidæ to Cioidæ, remarking that it bears "a deceptive resemblance to *Eledona*" of the Tenebrionidæ. In consequence of this, the Central-American Rhipidandri were omitted from the Tenebrionidæ when that family was treated by Mr. Champion.

These insects live in boleti, in the same manner as does *Eledona*, and I find on comparison that the resemblance between them is not, as described by Leconte, deceptive, but a perfectly genuine one, the two forms being really closely allied.

The structure of the feet of *Eledona* is very peculiar for a Heteromerous insect, as all the tarsi appear to be four-jointed. This fact is not, so far as I can find, stated in the literature of Coleopterology; and Leconte therefore doubtless supposed that the feet in this genus were evidently Heteromerous, and that the "Rhipidandri," in which they appear to be Tetramerous, must be quite distinct, and he was thus led to speak of the resemblance between *Eledona* and *Rhipidandrus* as deceptive.

In *Cherostus cornutus* (a Rhipidandrid) I have been able to see the structure of the

* By D. SHARP.

front tarsi and find that they are five-jointed, the basal joint being extremely short and connate with the second. This can only be seen by placing the specimen in a selected attitude, because the tarsus is inserted almost at the extremity of the tibia, and the lower part of the latter forms an edge that conceals the extreme base of the tarsus. I have seen almost the same structure in *C. walkeri*, the insect for which the genus *Cherostus* was established; here, however, the two joints do not seem to be so perfectly connate.

Other entomologists have been deceived by the apparently four-jointed feet and by the peculiar antennæ of *Rhipidandrus*, Lacordaire having described the genus as *Eutomus* and placed it in the Scolytidæ. Mr. Arrow, too, informs us that the genus (under the name *Heptaphylla*) has been referred to the Lamellicornia by Friedenreich and de Borre. The position of *Eledona* and *Rhipidandrus* is, I think, clearly that of an aberrant group of Tenebrionidæ allied to the Bolitophagini.

RHIPIDANDRUS.

Rhipidandrus, Leconte, Class. Col. N. Amer. ed. 1, p. 236 (1862); ed. 2, p. 232 (1883); Arrow, Ann. & Mag. Nat. Hist. (7) xiv. p. 31 (1904).
Eutomus, Lacordaire, Gen. Col. vii. p. 369 (1866).
Heptaphylla, Friedenreich, Stett. ent. Zeit. 1883, p. 375.

At present very few species are known of this genus, but as they occur in very different countries no doubt others will be discovered.

1. **Rhipidandrus mexicanus**, sp. n.

Piceus vel niger, antennis pedibusque testaceis; prothorace densissime sat fortiter sculpturato, anterius leviter angustato; elytris sulcatis, interstitiis angustissimis acute elevatis.
Long. $1\frac{1}{2}$–$2\frac{1}{4}$ millim.

Hab. MEXICO, Vera Cruz (*Sallé*); BRITISH HONDURAS, Belize (*Blancaneaux*); GUATEMALA, Yzabal (*Sallé*).

The fifth joint of the antennæ is large; the club consists of six broad hairy joints, very like those of Passalidæ, and capable of being closely adjusted as in that family of Coleoptera: the fifth joint shares in this development, inasmuch as it is longer on its inner aspect and admits of the base of the club being closely pressed to it.

2. **Rhipidandrus championi**, sp. n.

Ferrugineus, antennis pedibusque testaceis, prothorace densissime punctato; elytris sulcatis, interstitiis angustissimis acute elevatis.
Long. 2 millim.

Hab. GUATEMALA, El Reposo (*Champion*).

Extremely close to *R. mexicanus*; rather narrower and more parallel, the sculpture a little finer, the laminæ of the antennæ slightly shorter, and the process separating the front coxæ very slender. Two specimens.

CHEROSTUS.

Cherostus, Waterhouse, Ann. & Mag. Nat. Hist. (6) xiv. p. 68 (1894); Arrow, op. cit. (7) xiv. p. 31 (1904).

This genus is doubtfully distinct from *Rhipidandrus*: *cf.* Mr. Arrow's remarks (*l. c.*).

1. Cherostus cornutus.

Cherostus cornutus, Arrow, Ann. & Mag. Nat. Hist. (7) xiv. p. 31 [1].

Hab. Mexico, Oaxaca (*Sallé*), Canelas in Durango (*Flohr*).—Antilles, St. Vincent and Grenada [1].

We have received two specimens of this species. On comparison with the type in the British Museum, I find only very slight differences.

List of Species described from Central America since the publication of the preceding pages †.

PSELAPHIDÆ.

Hamotus ursulus, Schauf. Berl. ent. Zeitschr. 1887, p. 307.—Mexico.
—— *centralis*, Reitt. Deutsche ent. Zeitschr. 1888, p. 229.—Guatemala.
Bryaxis soror, Schauf. Tijdschr. voor Ent. xxx. p. 122 (1887).—Mexico.
—— *sarcinaria*, Schauf. l. c. p. 127.—Yucatan.
—— *biocellata*, Schauf. l. c. p. 127.—Mexico.
—— (*Eupines*?) *separabilis*, Schauf. l. c. p. 129.—Yucatan.
—— (——?) *adparata*, Schauf. l. c. p. 129.—Yucatan.
—— *impunctata*, Schauf. l. c. p. 132.—Yucatan.
Batribraxis inflexa, Schauf. l. c. p. 147.—Mexico.
**Actionoma obesum*, Raffr. Rev. Ent. Fr. xvii. p. 235 (1898).—Mexico.
**Actium caviceps*, Raffr. l. c. p. 234.—Mexico.
Apothinus brevicollis, Raffr. l. c. p. 221.—? Mexico.
*—— *clavatus*, Raffr. l. c. p. 222.—Mexico.
*—— *sharpi*, Raffr. l. c. p. 221.—Mexico.
**Batrisus* (*Arthmius*) *crassicornis*, Raffr. Ann. Soc. Ent. Fr. lxvi. pp. 492, 498 (1897).—Mexico.
*—— (——) *bubalus*, Raffr. l. c. pp. 465, 499.—Mexico.
—— (——) *simplicior*, Raffr. l. c. pp. 466, 500.—Yucatan.
*—— (——) *latipes*, Raffr. l. c. pp. 475, 503.—Mexico.

† The species marked with an asterisk were found amongst the refuse of Mexican tobacco in Paris.

Batrisus (*Arthmius*) *punctatus*, Raffr. l. c. pp. 496, 514.—Mexico.

Pseudotrimium microcephalum, Raffr. Rev. Ent. Fr. xvii. p. 230.—? Mexico.

**Tomoplectus cordicollis*, Raffr. l. c. pp. 266, 267.—Mexico.

**Bythinoplectus denticornis*, Raffr. Ann. Soc. Ent. Fr. lxv. p. 230, t. 10. fig. 16 (1897).—Mexico.

**Ctenisis brevicollis*, Raffr. l. c. p. 272.—Mexico.

—— *raffrayi*, Casey, Col. Not. v. p. 503 (1893).—Mexico and Arizona.

**Ctenisodes laticeps*, Raffr. l. c. p. 275.—Mexico.

Dalmodes schaufussi, Raffr. l. c. p. 267.—Mexico.

**Dalmophysis cylindrica*, Raffr. l. c. pp. 267, 268, t. 11. fig. 7.—Mexico.

**Eupsenius gibbicollis*, Raffr. l. c. p. 263.—Mexico.

*—— *mexicanus*, Raffr. l. c. p. 264.—Mexico.

*—— *grouvellei*, Raffr. l. c. p. 264.—Mexico.

**Sebaga lamellata*, Raffr. Rev. Ent. Fr. xii. p. 51, t. 2. fig. 37 (1893).—Mexico.

Arthmius pedestrianus, Raffr. Ann. Soc. Ent. Fr. lxxiii. p. 16, fig. 17 (1894).—Mexico, Durango.

Scalenarthrus subcarinatus, Raffr. l. c. p. 125.—Yucatan.

—— *obliquus*, Raffr. l. c. p. 126, fig. 127.—Mexico, Guanajuato.

*—— *clavicornis*, Raffr. Ann. Soc. Ent. Fr. 1896, p. 258, t. 11. fig. 10 (*Eupines*); op. cit. 1904, p. 209.—Mexico.

Drasinus binodulus, Raffr. Ann. Soc. Ent. Fr. lxxiii. p. 148, fig. 57.—Mexico.

Bunoderus carinicollis, Raffr. l. c. p. 152, fig. 58.—Mexico.

Reichenbachia diversula, Raffr. l. c. p. 242 (n. n. for *Bryaxis diversa*, Sharp, anteà, p. 29).

*—— *grouvellei*, Raffr. l. c. p. 158.—Mexico.

—— *irrita*, Raffr. l. c. p. 162.—Mexico.

—— *luteola*, Raffr. l. c. p. 163.—Mexico.

—— *falsa*, Raffr. l. c. p. 170, fig. 67.—Yucatan.

—— *mexicana*, Raffr. l. c. p. 173, fig. 69.—Mexico.

—— *appendiculata*, Raffr. l. c. p. 174, fig. 70.—Mexico.

—— *obnubila*, Raffr. l. c. p. 175.—Yucatan.

Euteleia nodosa, Raffr. l. c. p. 184.—Mexico.

Decarthron arthriticum, Raffr. l. c. p. 189, fig. 77.—Mexico, Durango.

—— *quadraticeps*, Raffr. l. c. p. 190, fig. 86.—Mexico, Cuautla.

—— *schmitti*, Raffr. l. c. p. 191, fig. 80.—Mexico, Cuernavaca.

—— *vulneratum*, Raffr. l. c. p. 192, fig. 82.—Mexico.

—— *planifrons*, Raffr. l. c. p. 194.—Yucatan.

SCYDMÆNIDÆ.

**Chevrolatia grouvellei*, Croiss. Bull. Soc. Ent. Fr. 1890, p. clvi; Schauf. Ent. Nachr. xvii. p. 33 (1891).—Mexico.

SILPHIDÆ.

Lomechon alfaroi, Wasmann, Deutsche ent. Zeitschr. 1897, p. 284, t. 2. fig. 5.—Costa Rica.

TRICHOPTERYGIDÆ.

Trichopteryx fuliginosa, Matth. Suppl. Mon. Trichopt. p. 68 (1900).—Mexico.

SCAPHIDIIDÆ.

Scaphidium matthewsi, n. n. for *S. unicolor*, Matth., Csiki, Wien. ent. Zeit. 1904, p. 85.

HISTERIDÆ †.

Homalodes humerosus, Schmidt, Ent. Nachr. xv. p. 362 (1889) (*Omalodes*).—Mexico, Medellin.

—— *perpolitus*, Schmidt, Ent. Nachr. xix. p. 11 (1893) (*Omalodes*).—Guatemala.

Phelister canalis, Lewis, anteà, p. 193; Mars. Bull. Soc. Ent. Fr. 1889, p. cxxxix.

—— *uncistrius*, Lewis, anteà, p. 192; Mars. l. c. p. cxlvi.

—— *insolitus*, Schmidt, Ent. Nachr. xix. p. 12.—Mexico.

—— *sculpturatus*, Schmidt, l. c. p. 12.—Mexico.

—— *hamistrius*, Schmidt, l. c. p. 13.—Mexico.

—— *completus*, Schmidt, l. c. p. 81.—Mexico.

—— *parallelisternus*, Schmidt, l. c. p. 86.—Mexico.

—— *plicicollis*, Schmidt, l. c. p. 87.—Mexico.

—— *aduncus*, Schmidt, l. c. p. 89.—Mexico.

Reninus, n. n. for *Renia* (*R. salvini*, anteà, p. 220), Lewis, Ann. & Mag. Nat. Hist. (6) iv. p. 275 (1889).

Synodites gibbidorsum, Schmidt, Deutsche ent. Zeitschr. 1893, p. 180.—Mexico.

—— *detritus*, Schmidt, l. c. p. 180.—Mexico.

—— *graniformis*, Schmidt, l. c. p. 181.—? Mexico.

Hister latistrius, Lewis, Ent. Monthly Mag. xxvii. p. 106 (1891).—Mexico, Tepic.

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† For the corrections in the synonymy, see my new Catalogue of Histeridæ, 1905.—G. .L

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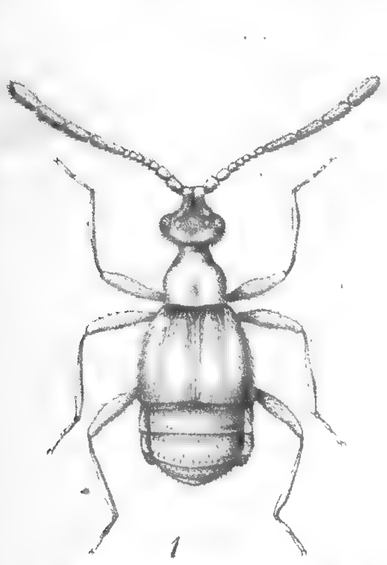
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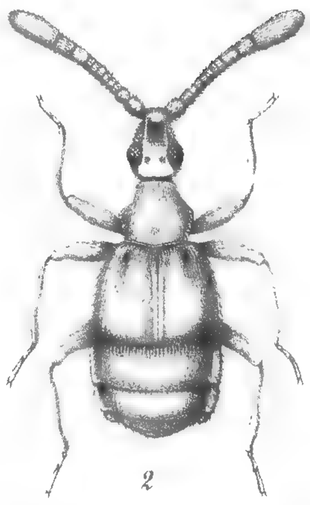
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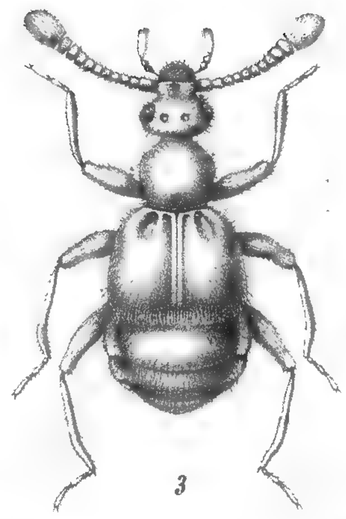
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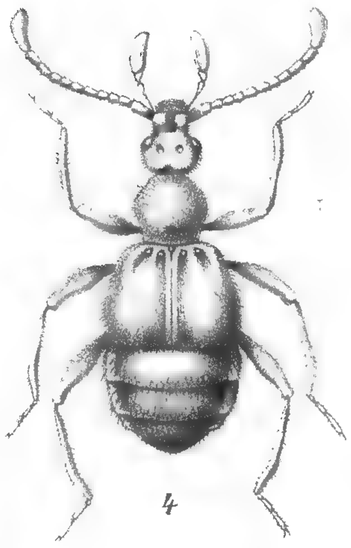
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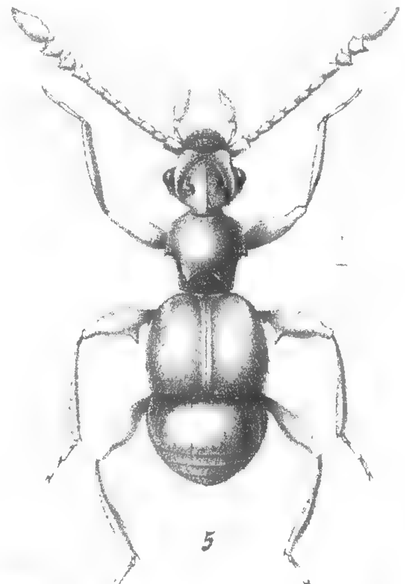
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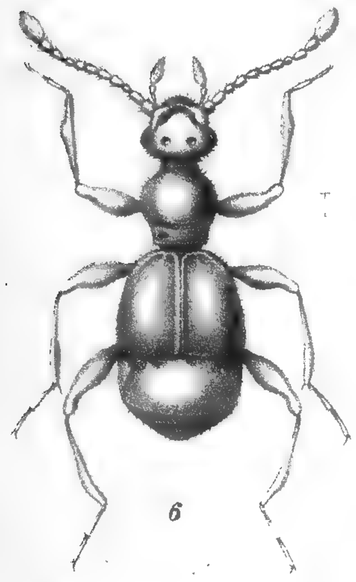
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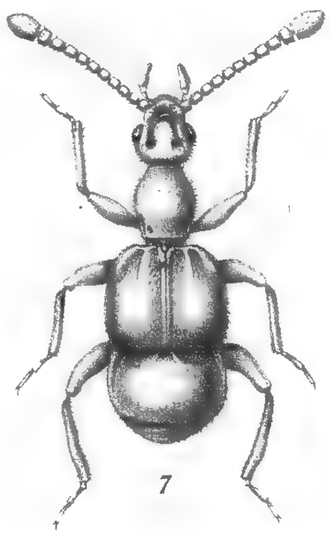
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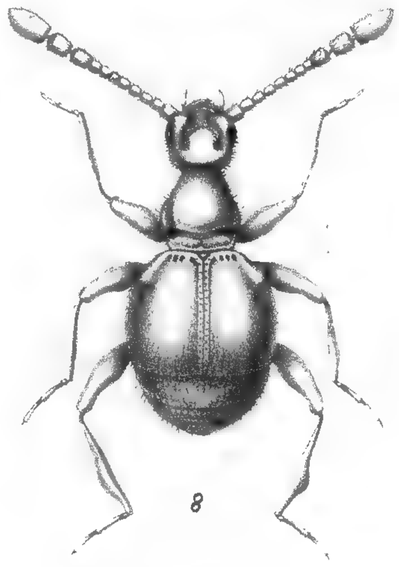
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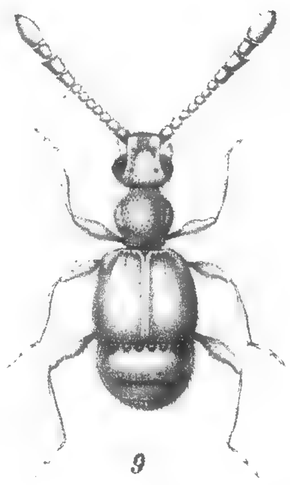
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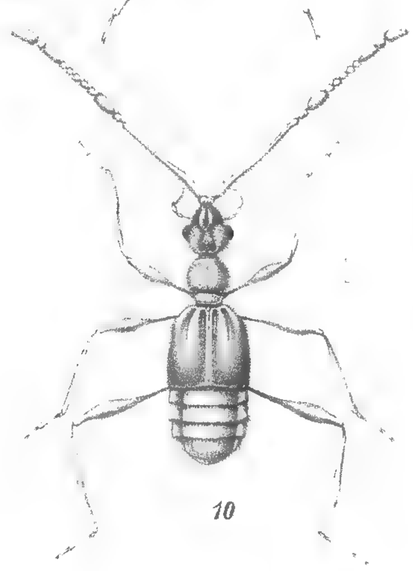
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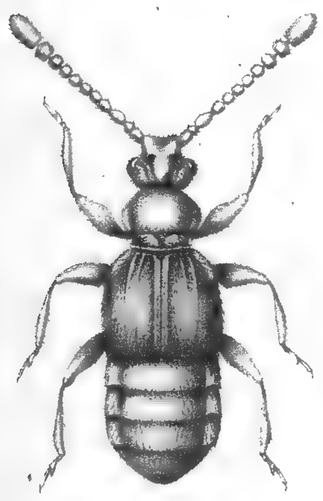
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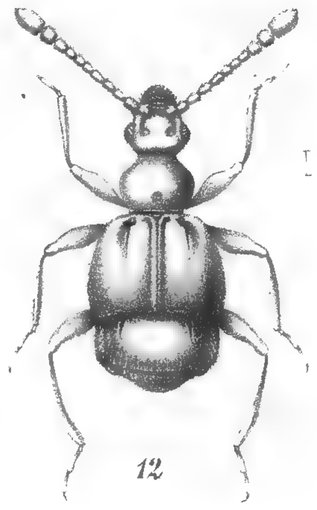
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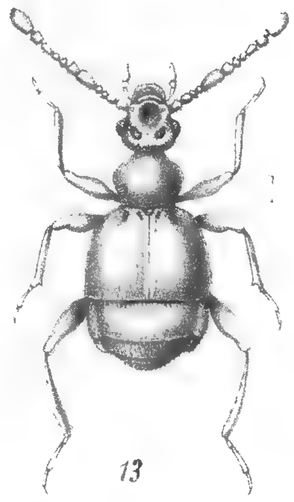
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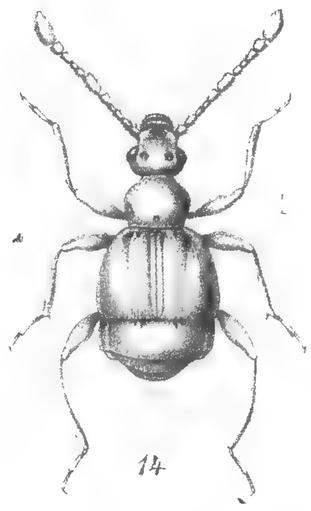
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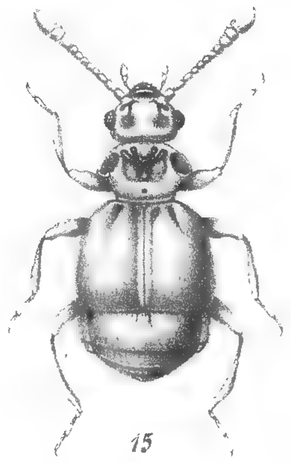
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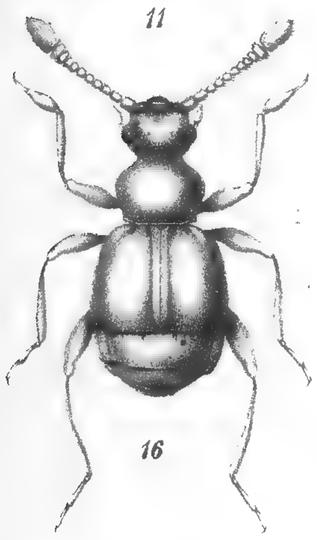
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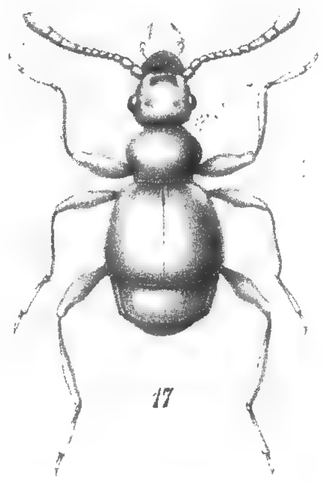
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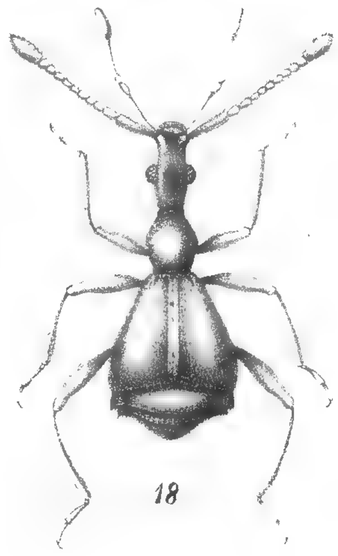
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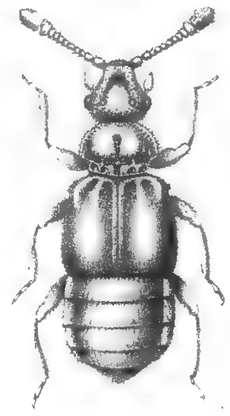
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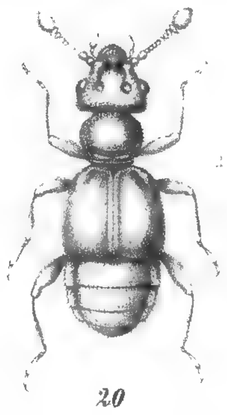
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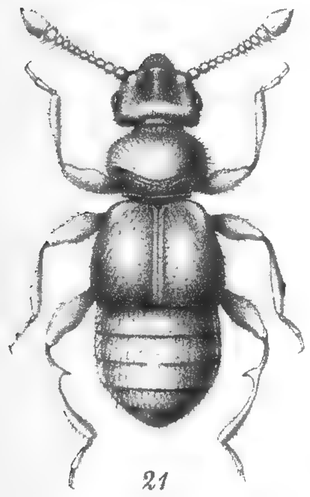
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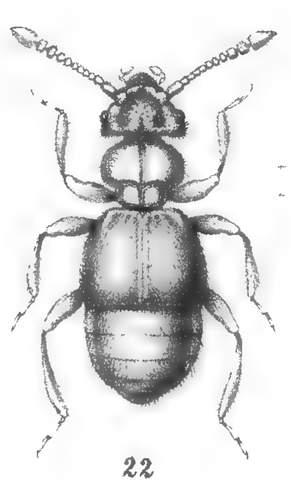
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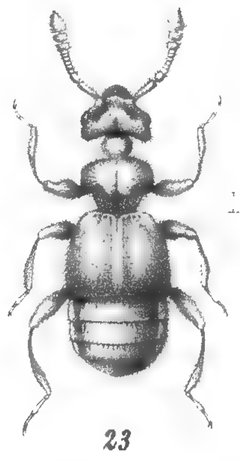
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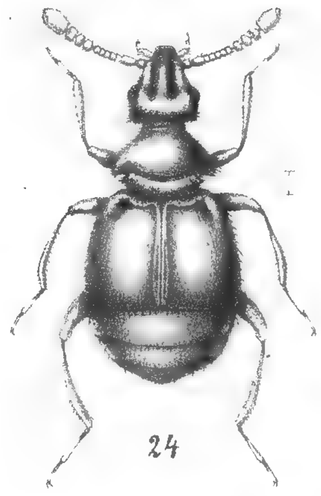
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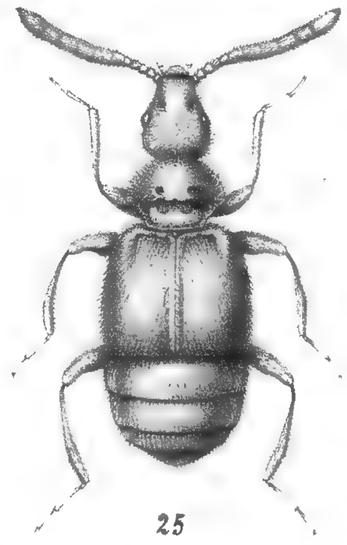
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1 DESIMIA DISPAR.
2 EPHIMIA CRASSICORNIS.
3 HAMOTUS SETIPES.
4 " GRANDIPALPIS.
5 BATRISUS HAMATICOLLIS.
6 " SIMPLICICORNIS.
7 " CRASSIPES.
8 EUPHALEPSUS REITTERI.
9 BATOCTENUS PUNCTICOLLIS.
10 METOPIAS ELEGANS.
11 CACCOPLECTUS CELATUS.
12 DECARTHRON FALLACIOSUM.
13 BRYAXIS SALLÆI.
14 " DIVERSA.
15 " VULNERATA.
16 " TRIMIOIDES.
17 PSELAPTUS BATRISOIDES
18 PSELAPHUS LONGICEPS.
19 APOTHINUS OBSCURUS.
20 TRIMIOPSIS MINUTA.
21 DALMODES BREVICOLLIS
22 EURHEXIUS VESTITUS.
23 RHEXIUS OPTATUS.
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25 ENDYTOCERA VESTITA.

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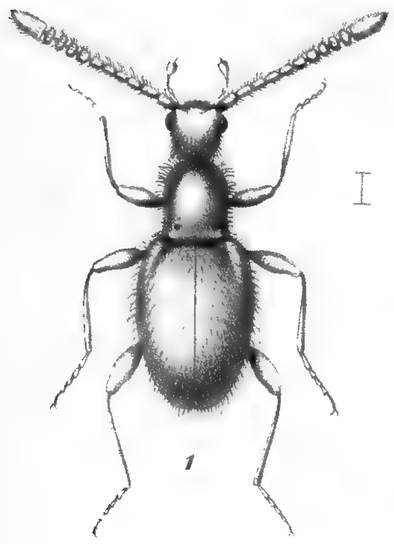

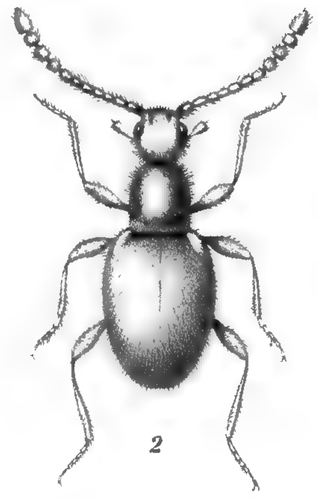

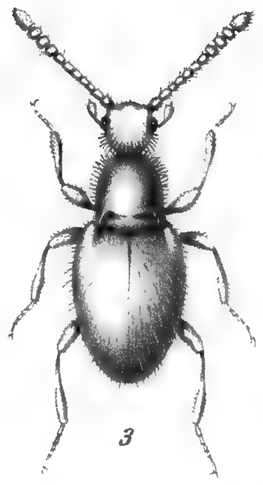

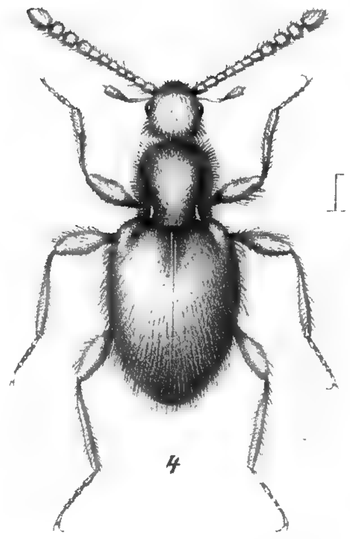

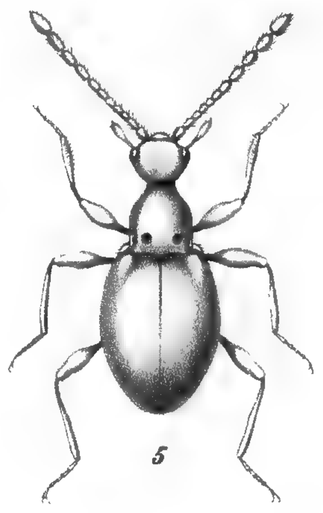

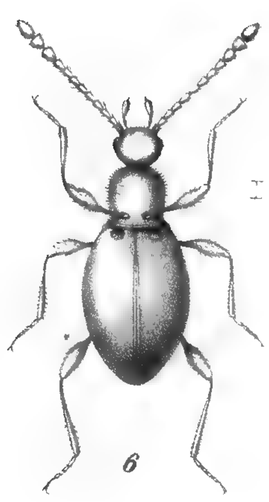

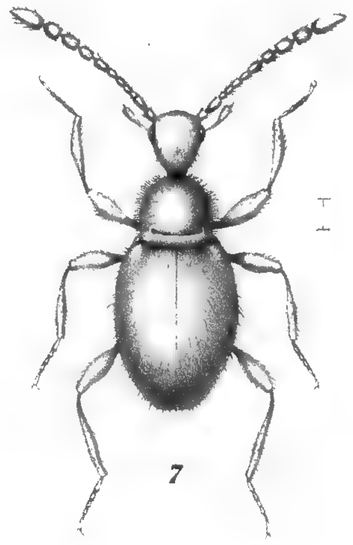

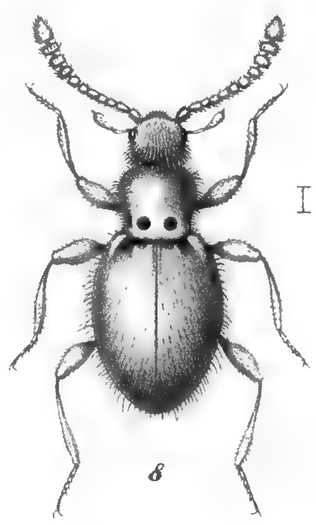

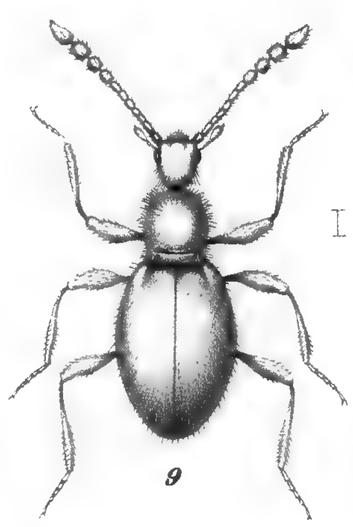

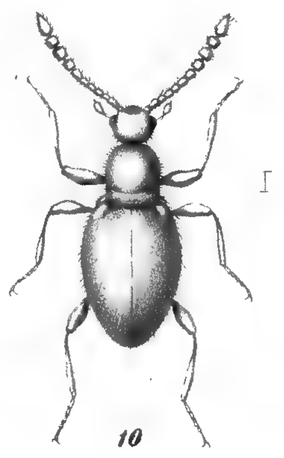

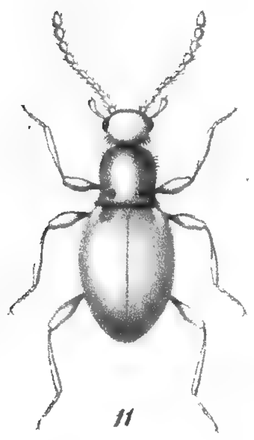

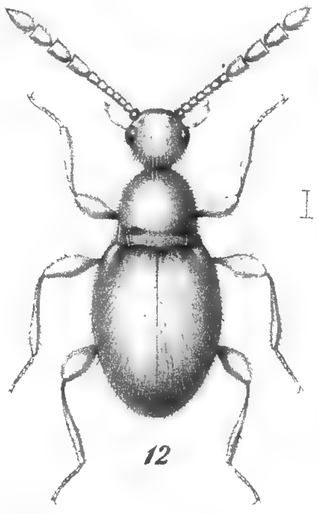

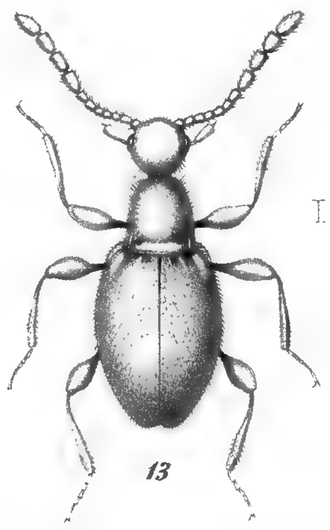

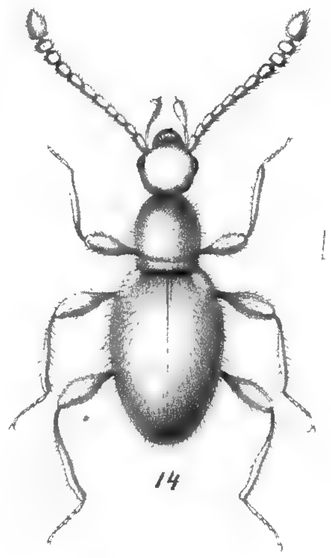

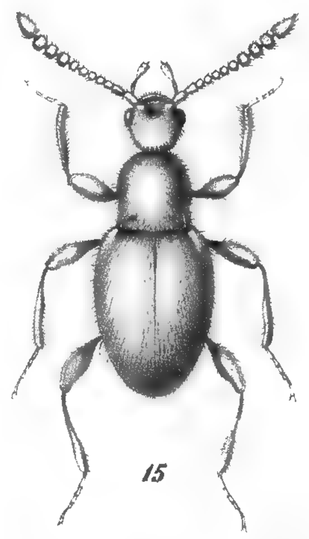

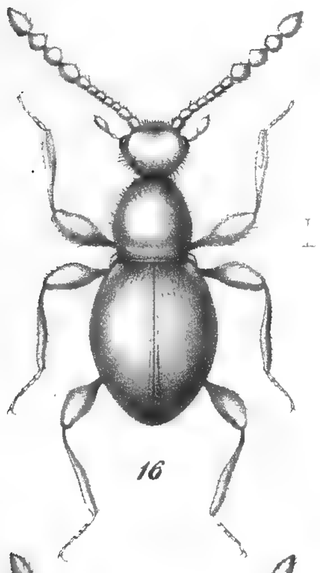

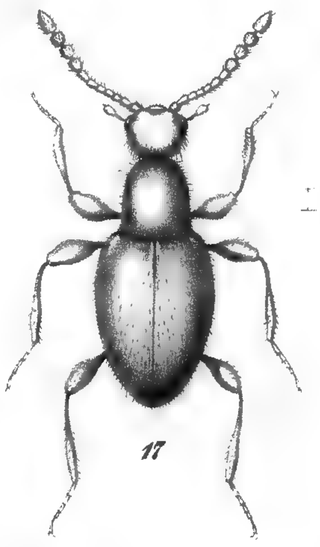

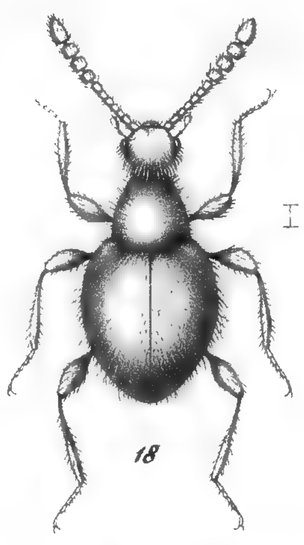

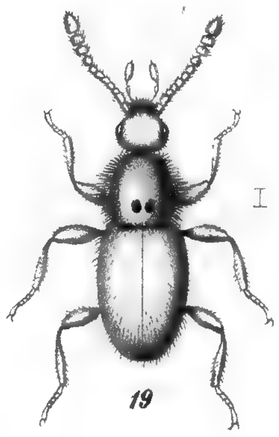

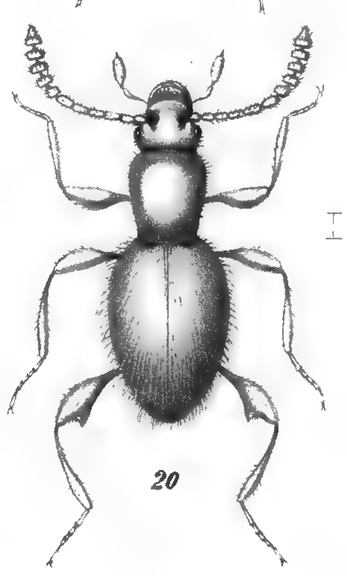

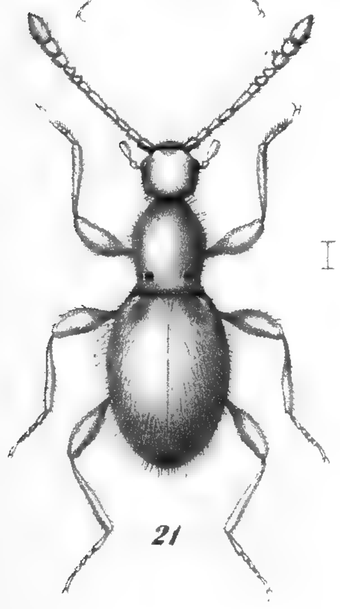

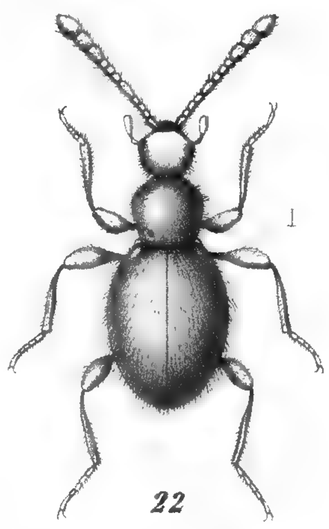

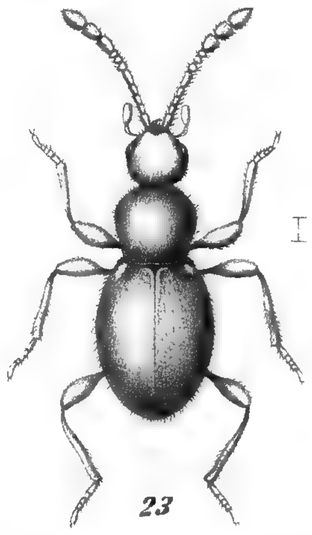

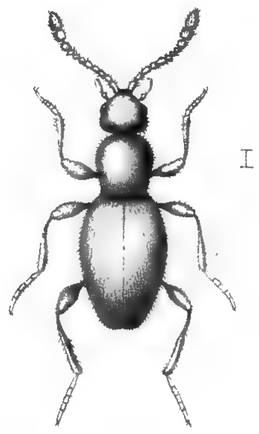

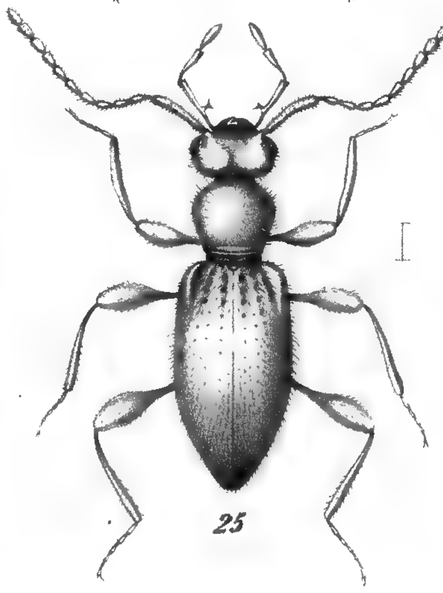

1. EUCONNUS GRAVIDUS.
2. „ SUBCLAVATUS.
3. „ OSCILLANS.
4. „ INDUTUS.
5. „ CALVUS.
6. „ GRACILICORNIS.
7. „ GIRAFFA.
8. „ EXCAVATUS.
9. EUCONNUS MUTANDUS.
10. „ GUATEMALENUS.
11. „ SUBTILIS.
12. „ CHIRIQUENSIS.
13. „ GERMANUS.
14. „ INCULTUS.
15. „ PUBIFER.
16. „ VIVIDUS.
17. „ MEDIALIS.
18. EUCONNUS FUSTIGER.
19. SCYDMÆNUS BREVIPES.
20. HOMOCONNUS SPINIPES.
21. EUMICRUS BRUNNEUS.
22. „ COMMILITONIS.
23. „ BREVIPES.
24. „ CONCRETUS.
25. HECOTUS AGILIS.

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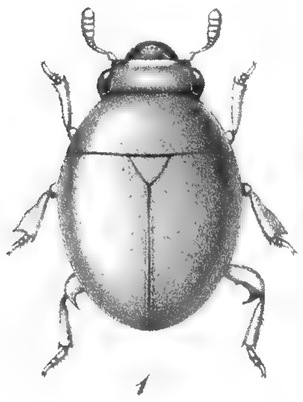
Vienna, Bannwarth Th. imp.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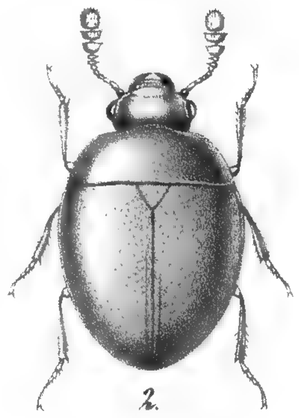
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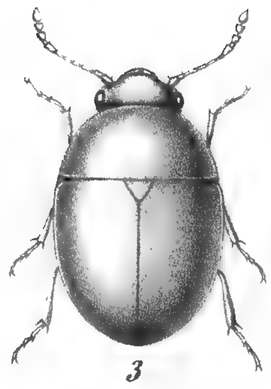
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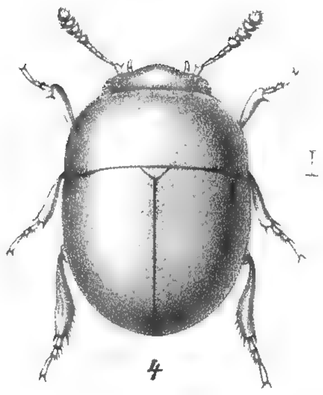
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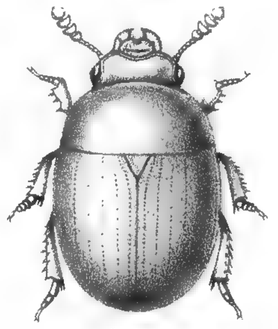
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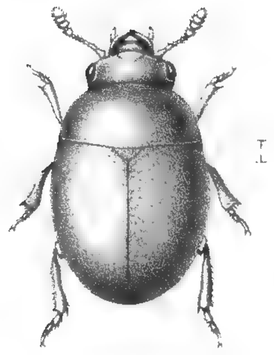
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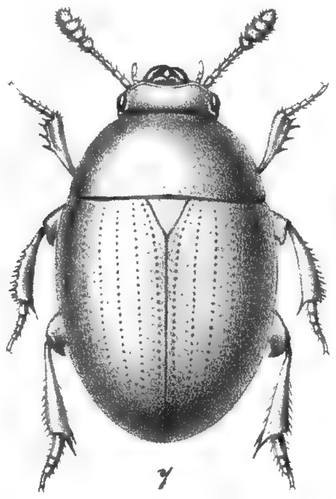
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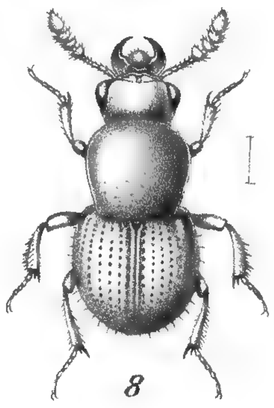
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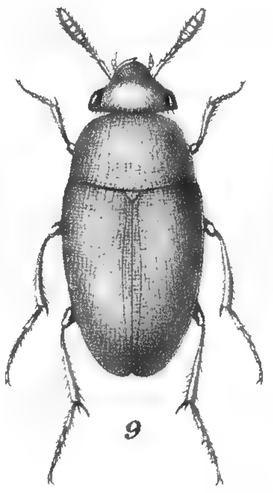
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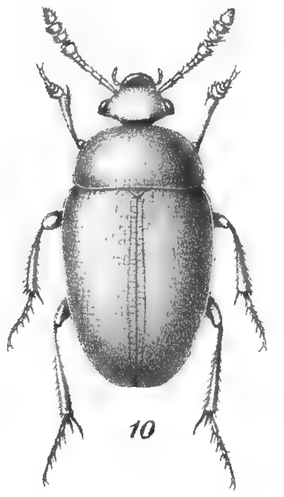
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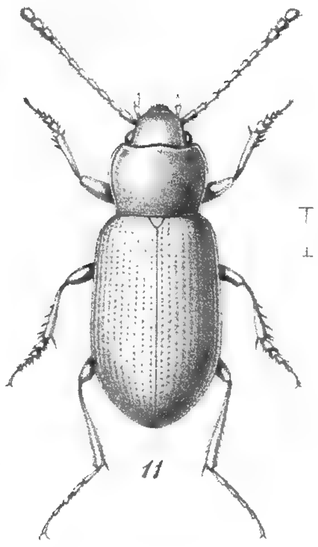
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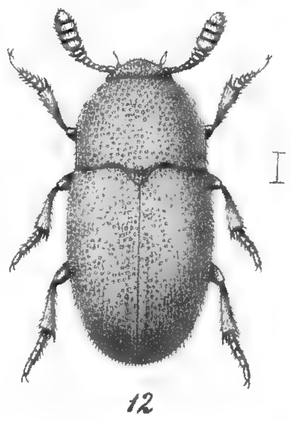
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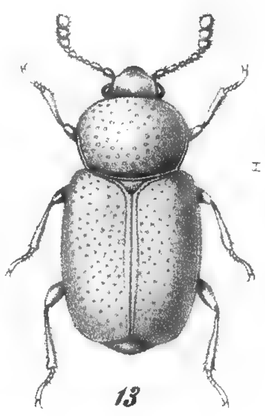
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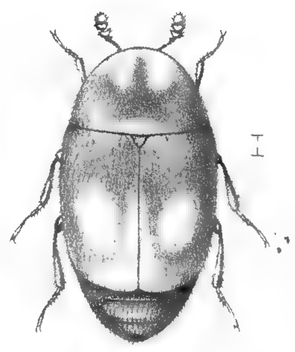
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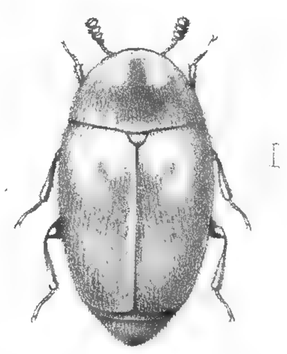
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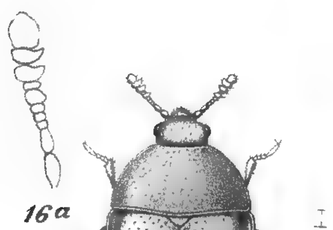
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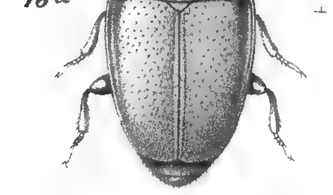
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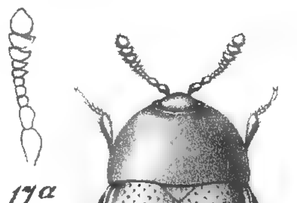
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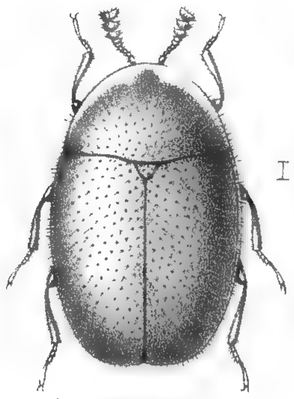
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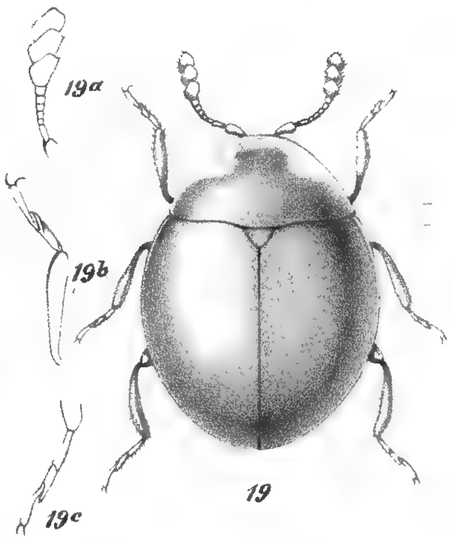
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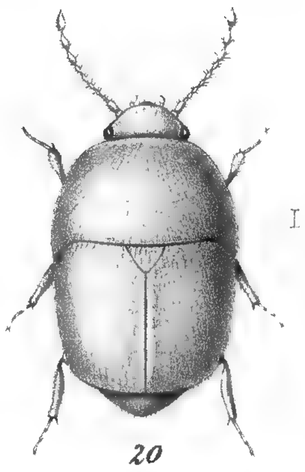
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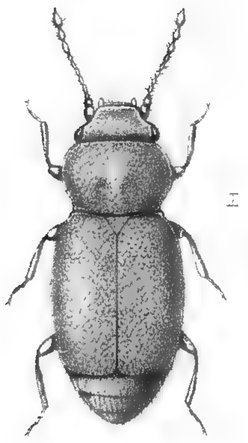
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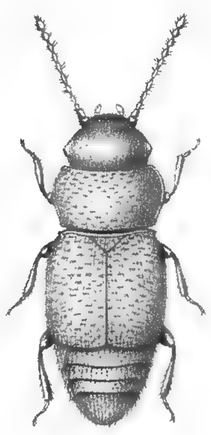
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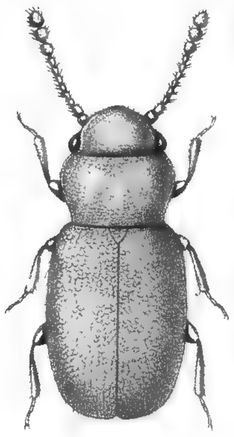
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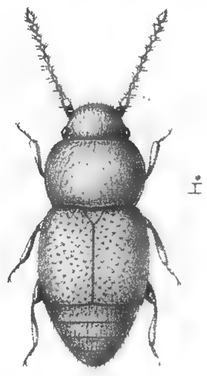
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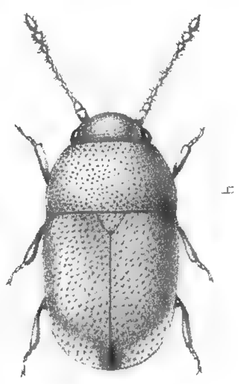
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1a CREAGROPHORUS BIHAMATUS.
2. AGATHIDIUM COGNATUM.
3. AGLYPTUS HORNI.
4. SCOTOCRYPTUS INQUILINUS.
5. CYRTUSA BLANDISSIMA.
6.♀ CREAGROPHORUS BIHAMATUS.
7.♂ ANISOTOMA PODAGRICA.
8. DIETTA SHARPI.
9. PTOMAPHAGUS FORTICORNIS.
10. CHOLEVA FIMBRIATA.
11. PTEROLOMA SALLÆI.
12. COLON CLAVATUM.
13, 13a. ÆNIGMATICUM PTILIOIDES.
14, 14a. SACIUM OCELLATUM.
15, 15a,b. „ LECONTEI.
16, 16a. ECTINOCEPHALUS TROPICUS.
17, 17a. CONODES CONICUS.
18. ARTHROLIPS HIRSUTUS.
19, 19a-c. CORYLOPHODES CHAMPIONI.
20. TRICHOPTERYX GODMANI.
21. PTINELLA INCERTA.
22. „ CHAMPIONANA.
23. PTILIUM TROPICUM.
24. CHAMPIONELLA NUBIGENA.
25. THROSCIDIUM INVISIBILE.

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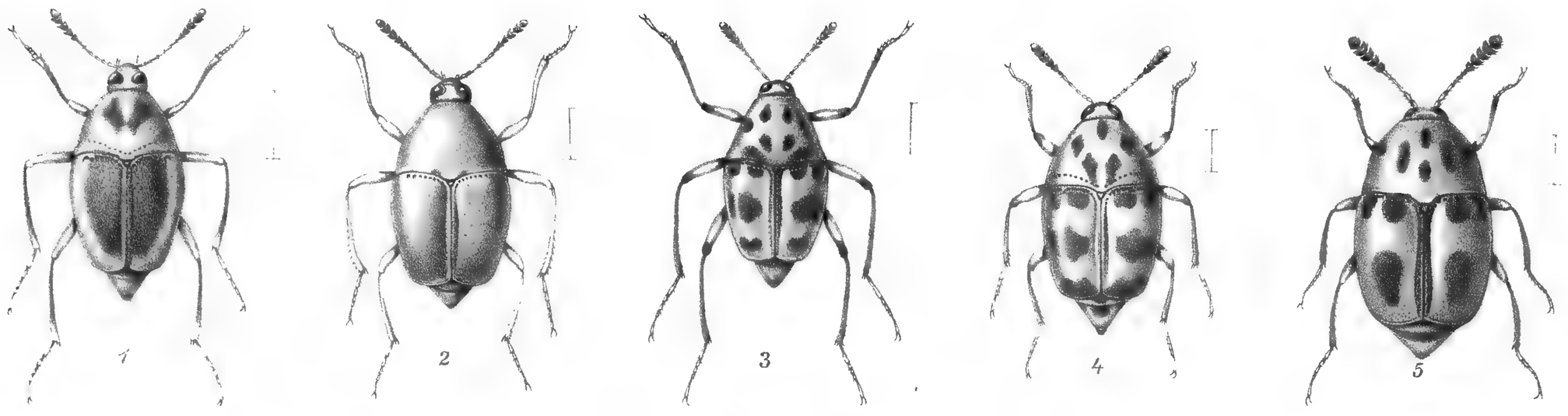

1. SCAPHIDIUM MARGINATUM.
2. " RUBICUNDUM.
3.♂ " VARIABILE.
4.♀ " VARIABILE *Var.*
5. " LINEATOCOLLE.
6. " TRANSVERSALE.
7.♂ " ATRUM.
8.♀ " ATRUM.
9. CYPARIUM TERMINALE.
10. " SALLÆI.
11. " CHAMPIONI.
12. SCAPHISOMA BALTEATUM.
13. " LUNATUM.
14. TOXIDIUM BIFASCIATUM.
15. " GAMMAROIDES.
16. PHYLLOMA PLAGIGERUM.
17,17a. " FACETUM.
18.♂ HOLOLEPTA CANALICOLLIS.
19. " VULPES.
20. LIODEMA DORCOIDES.
21. APOBLETES CONNECTENS.
22. PLATYSOMA COLUMELLARE.
23. " COLUMELLARE.
24. PHELISTER CUMANENSIS.
25. " CUMANENSIS.

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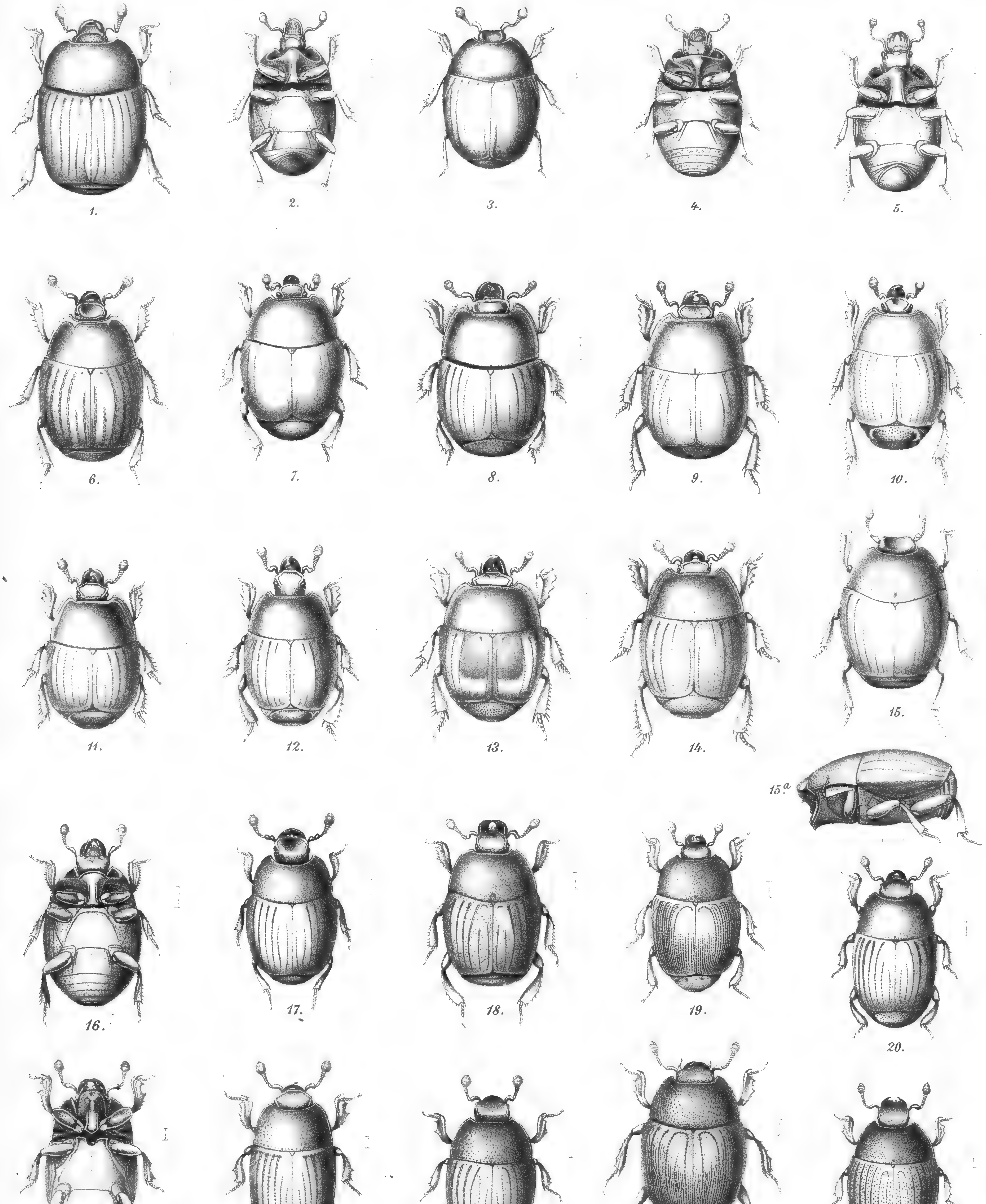

1. PHELISTER GODMANI.
2. " PANAMENSIS.
3. " EXIMIUS.
4. " CARINATUS.
5. " UNCISTRIUS.
6. " CRENATUS.
7. HOMALODES CLAVULUS.
8. HISTER CILIATUS.
9. HISTER PIOTI.
10. " BULLATUS.
11. " NODATUS.
12. " MONTIVAGUS.
13. " PATAGIATUS.
14. " TRUNCATISTERNUM.
15, 15a. EPIERUS FRONTALIS.
16. " PATRUELIS.
17. " SCITUS.
18. EPIERUS RUFULUS.
19. CARCINOPS MULTISTRIATA.
20. " FUMOSA.
21. " CAVISTERNUM.
22. " ATRATA.
23. " EXIMIA.
24. " GARBIGLIETTII.
25. " PUNCTINOTUM.

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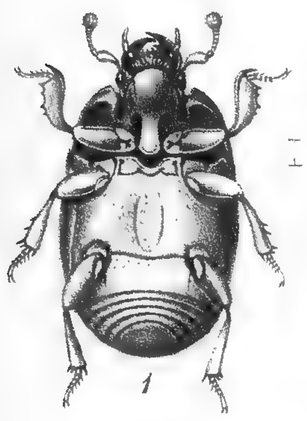
Vienna, Bannwarth Th. imp.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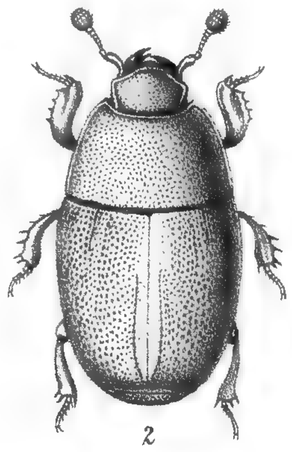
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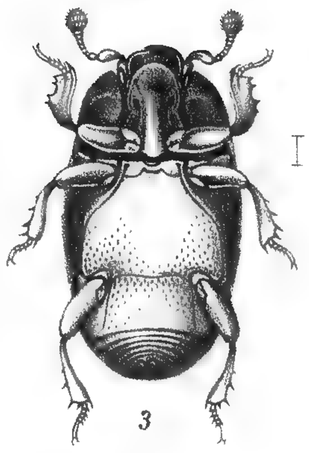
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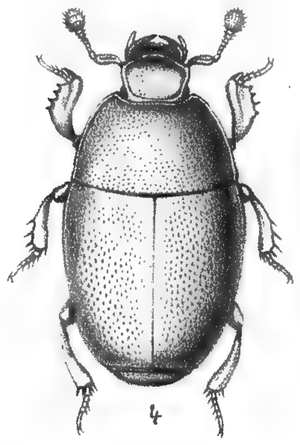
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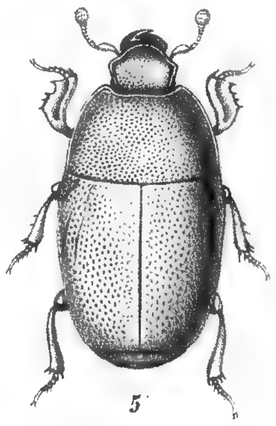
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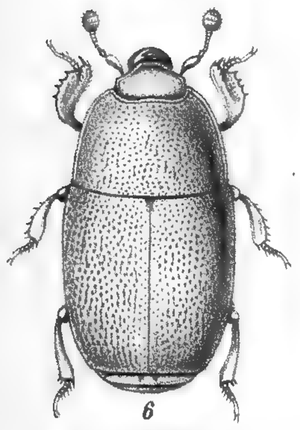
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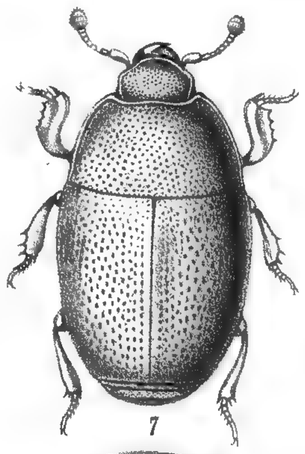
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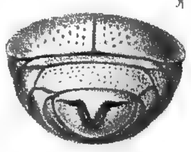
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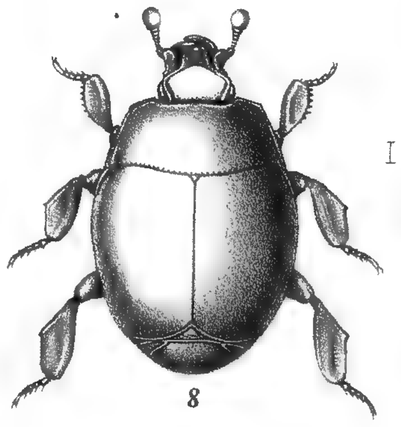
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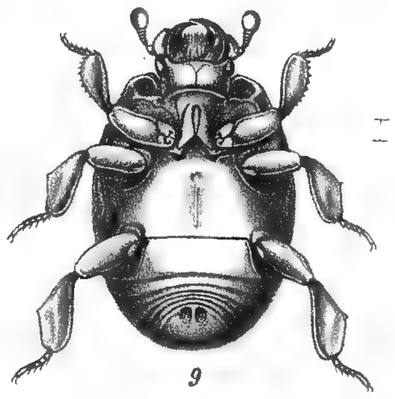
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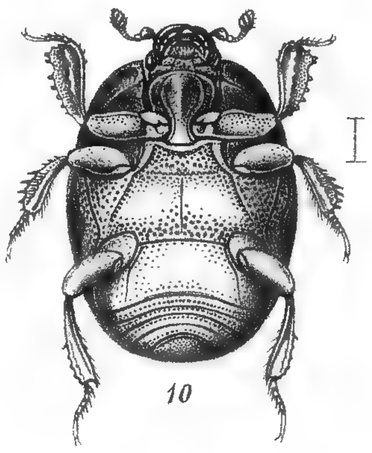
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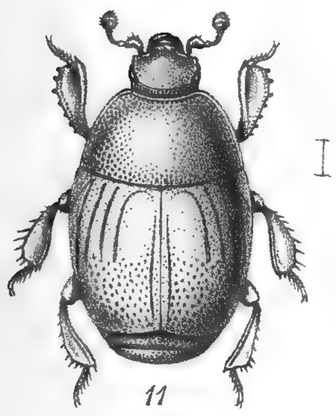
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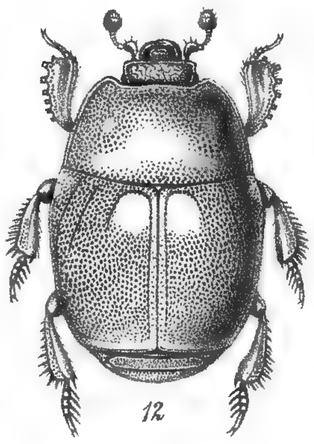
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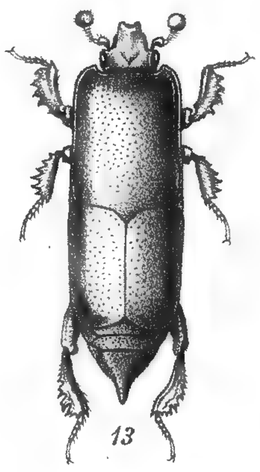
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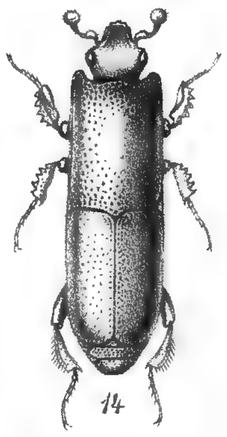
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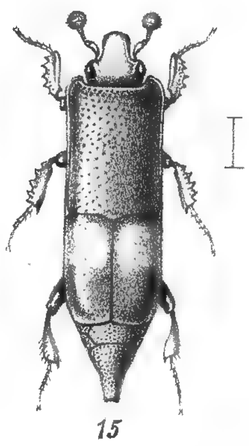
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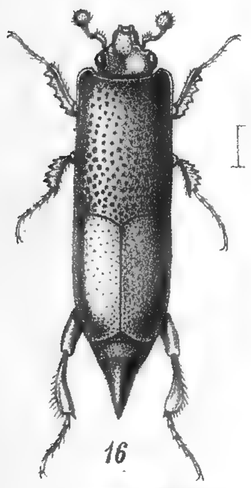
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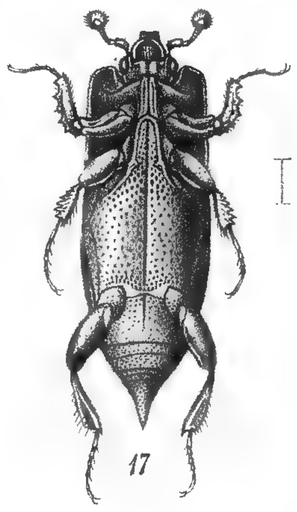
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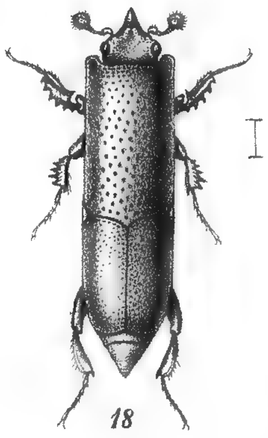
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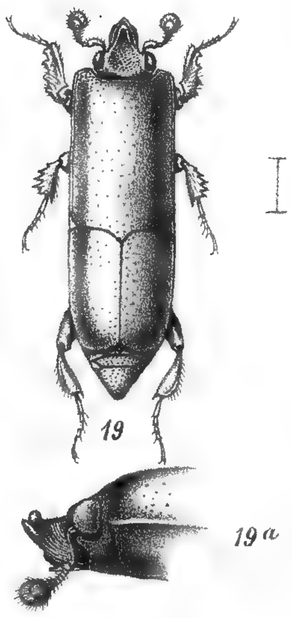
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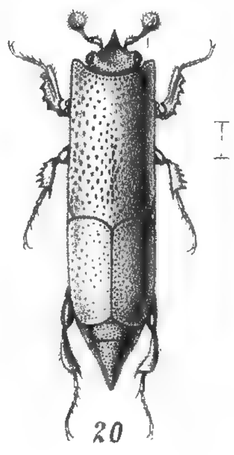
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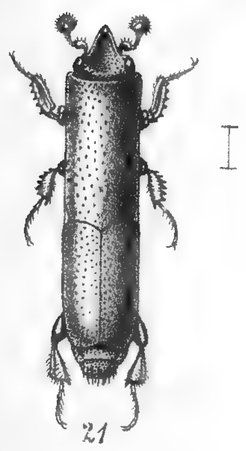
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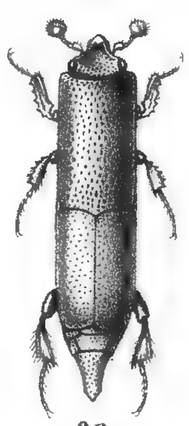
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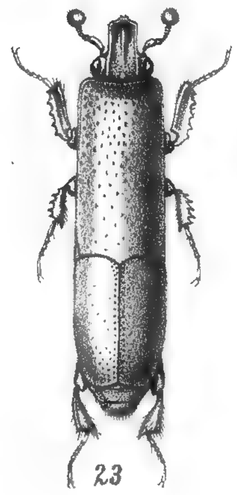
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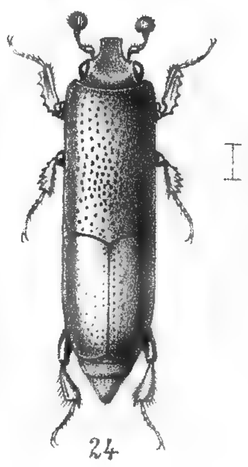
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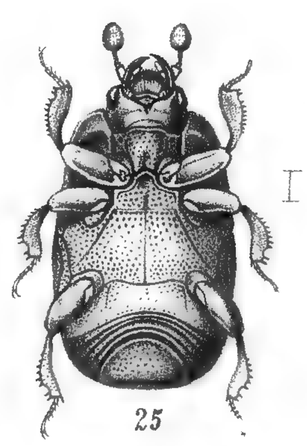
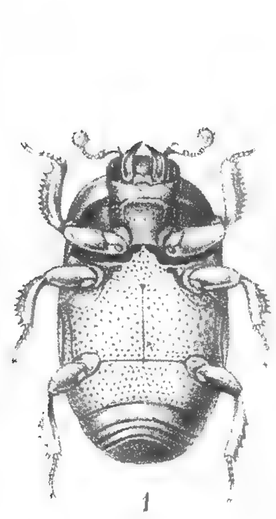

25

1 PAROMALUS NOTABILIS.
2 " ROGALIS.
3 " SIMILIS.
4 " INFLATUS.
5 " DIVARICATUS.
6,6a " SAGILLATUS.
7,7a " SULCATUS.
8,9 EUCLASEA GODMANI.
10 SAPRINUS SOLITARIUS.
11 " QUÆSITUS.
12 " GEMMENUS.
13 ♀ TRYPANÆUS TORPEDO.
14 ♂ " MONTIVAGUS.
15 ♀ " AMPULLACEUS.
16,16a ♀ " BIFIDUS.
17 ♀ TRYPANÆUS TUBERCULIFRONS.
18 ♂ " COLUMELLARIS.
19,19a ♂ " VULCANIUS.
20 ♂ " ACULEATUS.
21♂,22 ♀ " PARALLELUS.
23♂,24♀ " ANGUSTATUS.
25 TERETRIOSOMA IMPRESSISTERNUM.

M. Freih. v. Schlerefth.

Vienna, Bannwarth Th. imp.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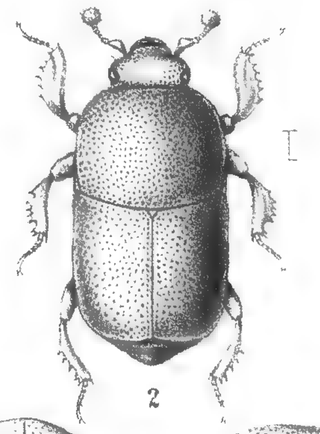
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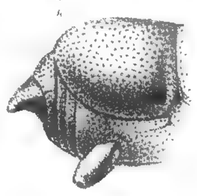
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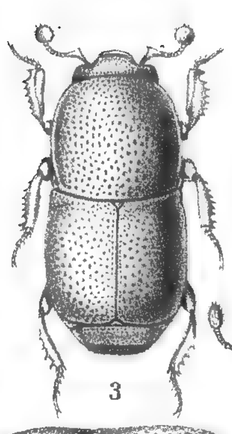
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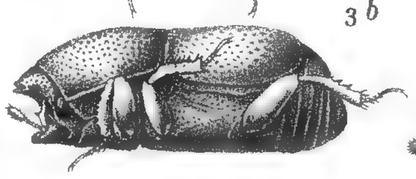
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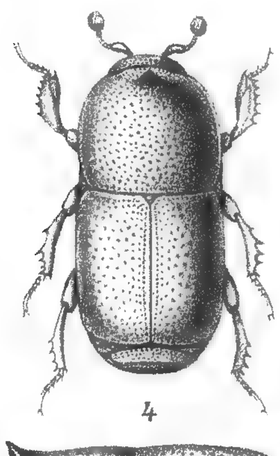
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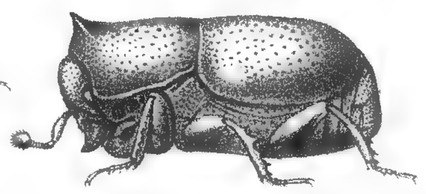
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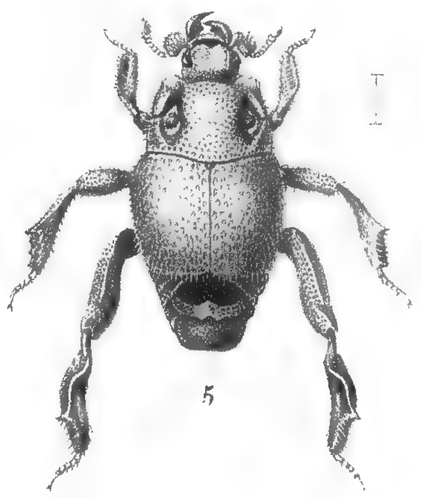
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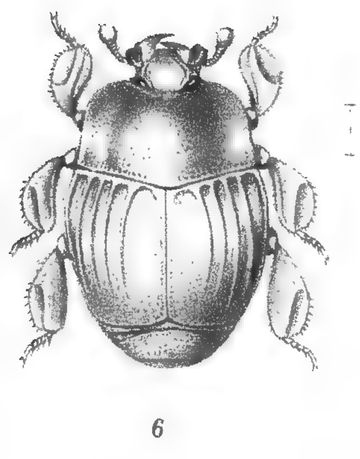
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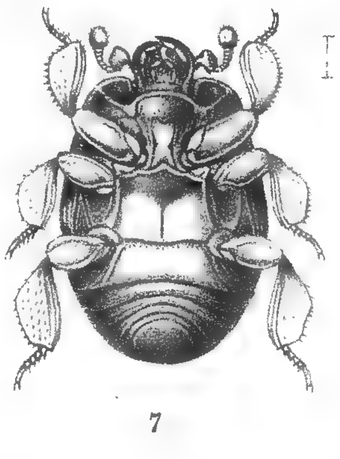
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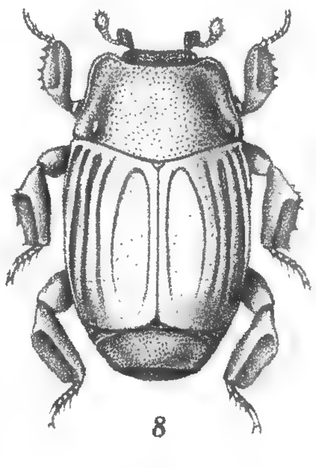
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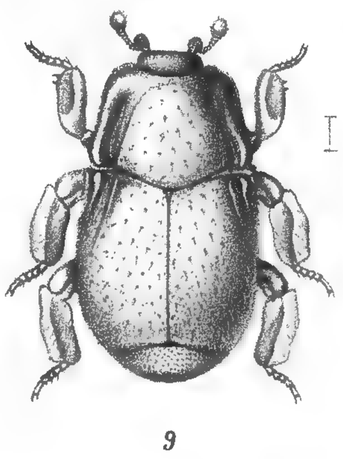
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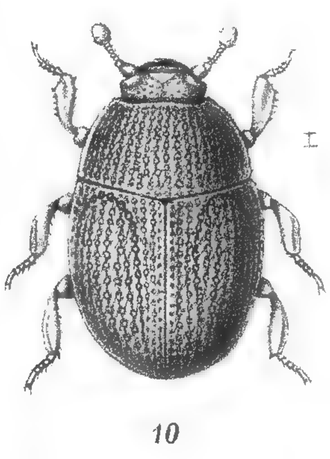
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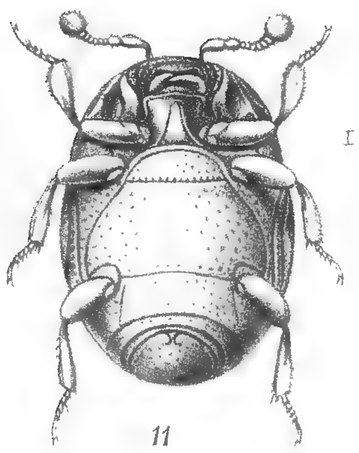
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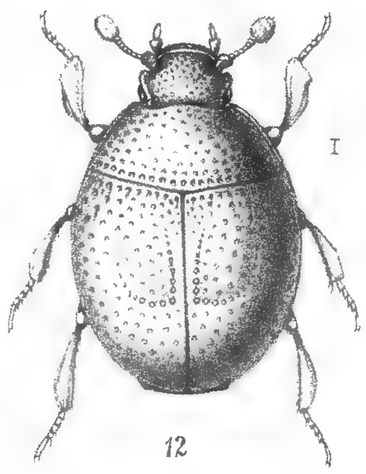
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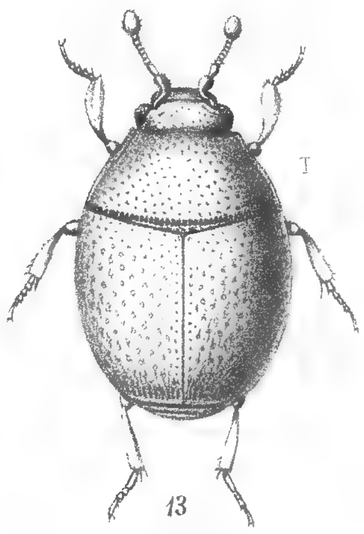
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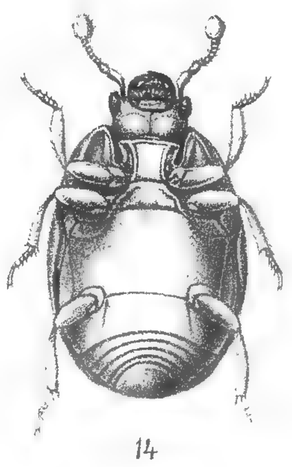
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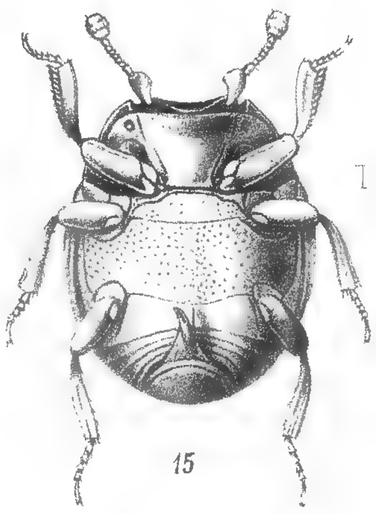
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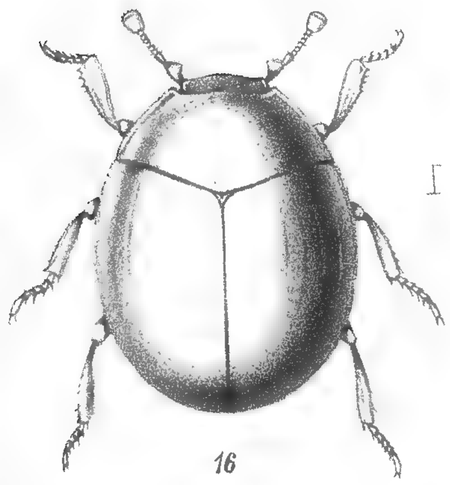
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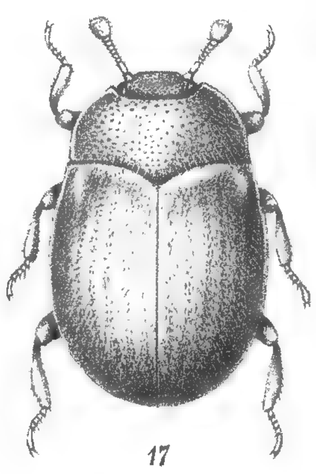
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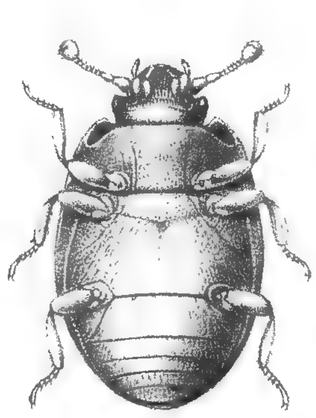
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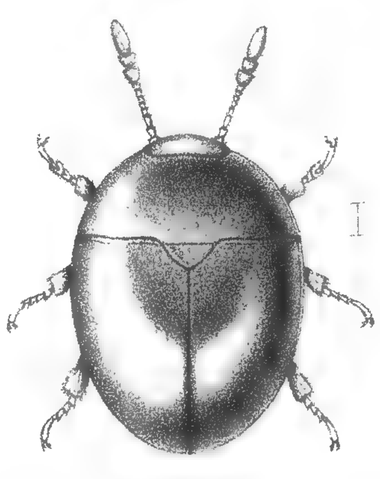
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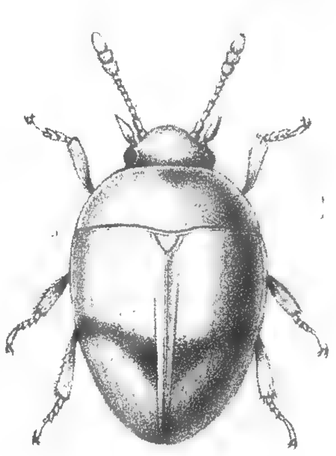
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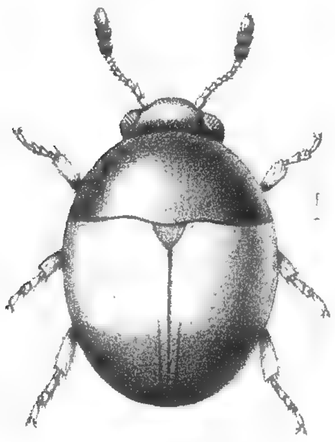
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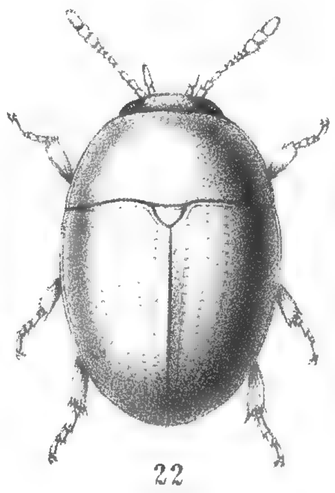
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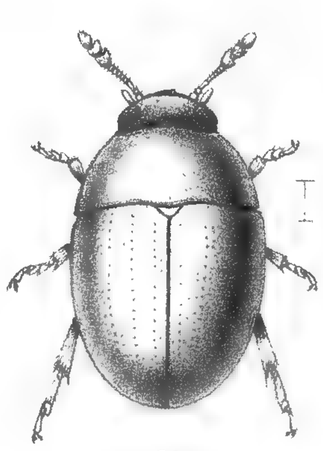
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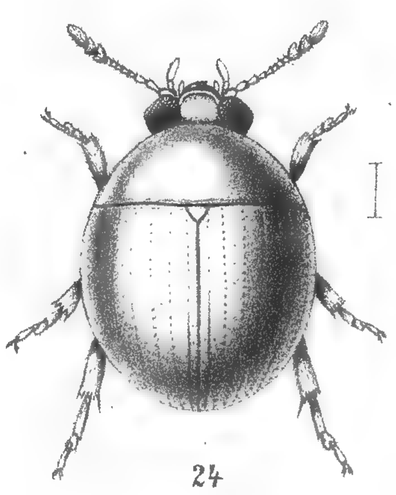
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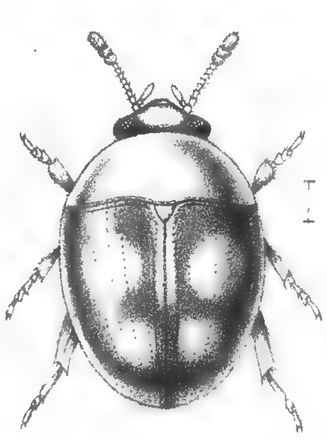
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2, 2a, b. " CONIGERUM.
3, 3a, b. " CAVIFRONS.
4, 4a. " PARADOXUM.
5. TERAPUS MNISZECHI.
6, 7. RENIA SALVINI.
8. HOMALOPYGUS ÆQUATUS
9. CACHEXIA PUBERULA.
10. BACANIUS SCALPTUS.
11. " IGNOBILIS.
12. " HAMATUS.
13. ACRITUS QUADRISTRIATUS.
14. " LILIPUTIANUS.
15. IDOLIA ANTENNATA.
16. " SCITULA.
17, 18. MYCHOCERUS PILIFER.
19. PHALACRUS SCUTELLARIS.
20. EUSTILBUS MOLLIS.
21. LIOPHALACRUS BICOLOR.
22. ACYLOMUS ACICULATUS.
23. EULITRUS ESTRIATUS.
24. LITOLIBRUS OBESUS.
25. " QUADRATUS.

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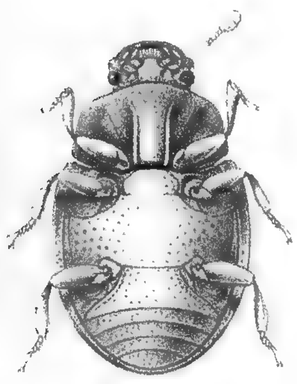
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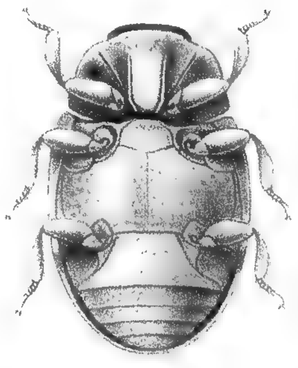
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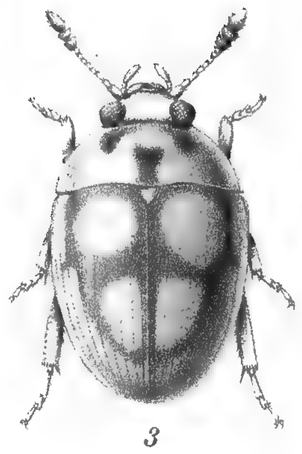
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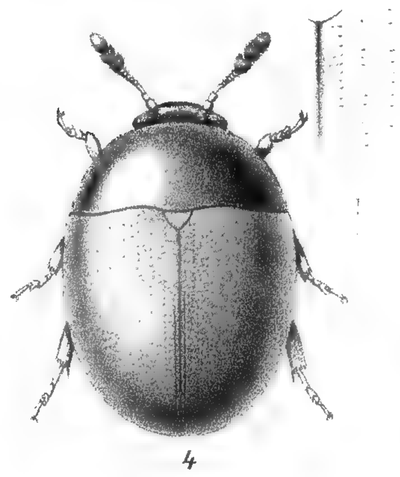
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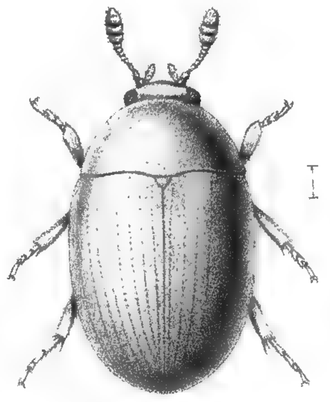
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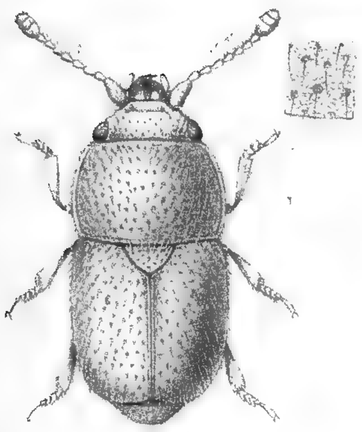
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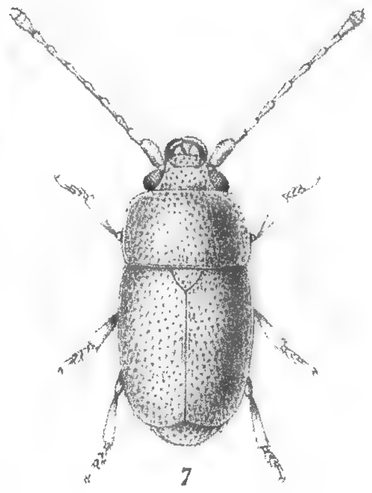
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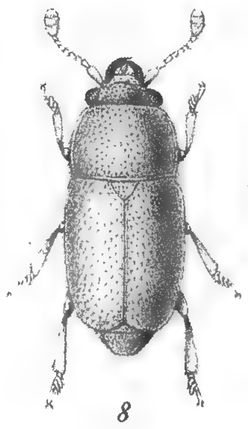
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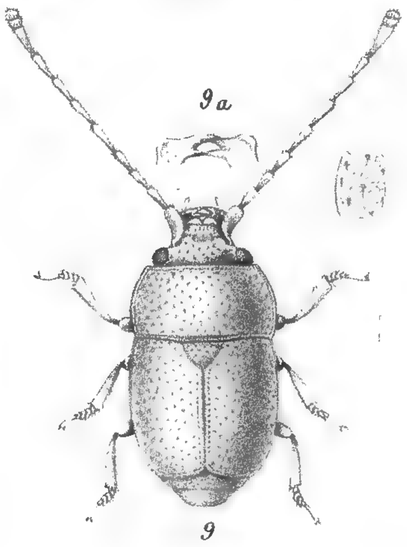
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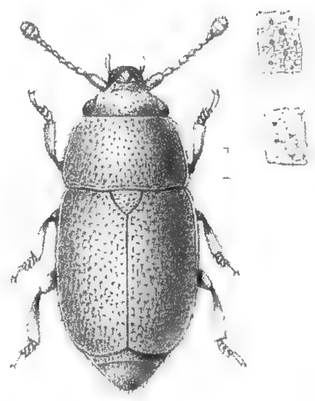
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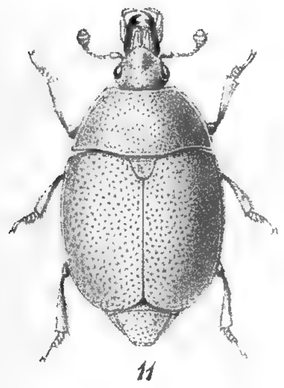
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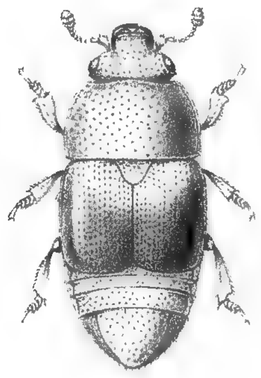
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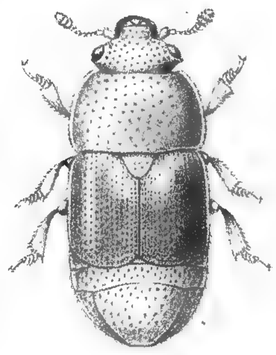
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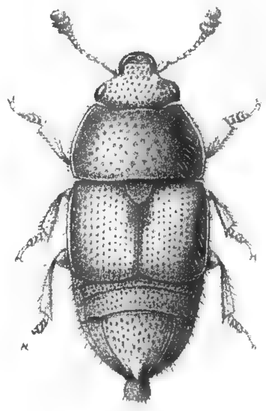
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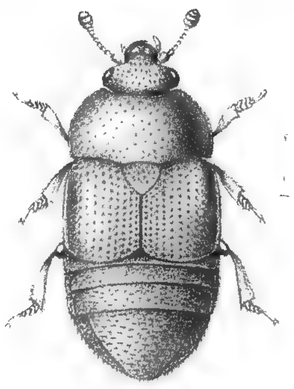
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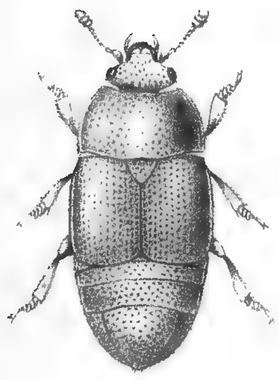
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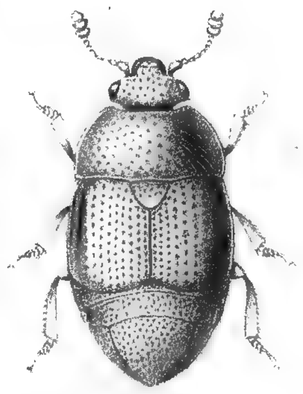
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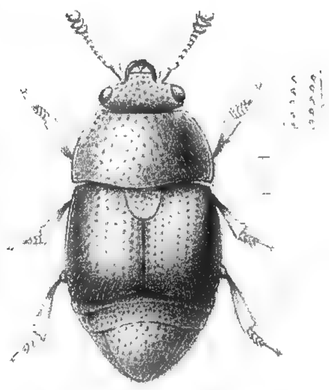
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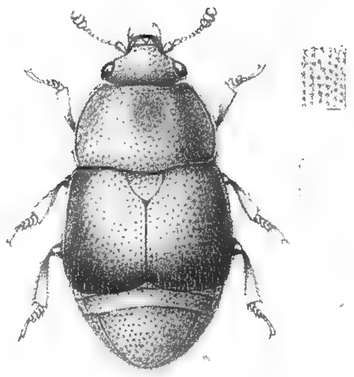
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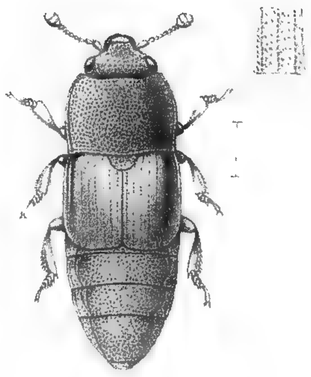
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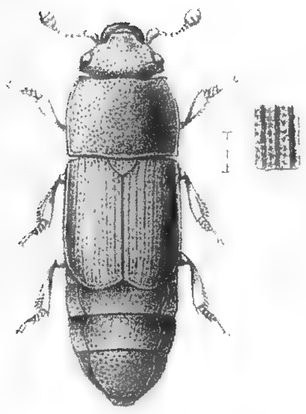
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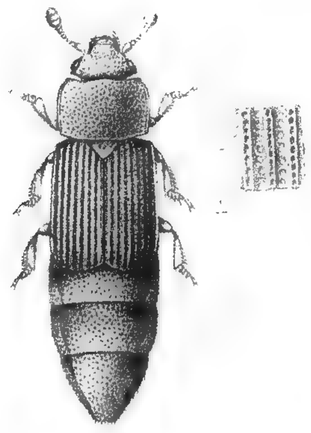
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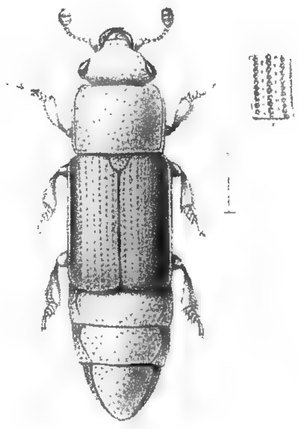
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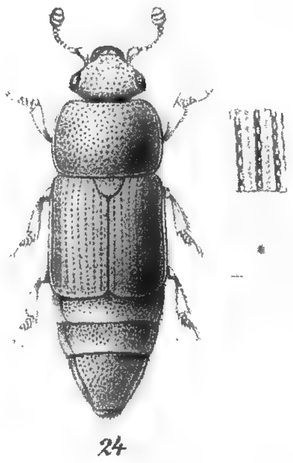
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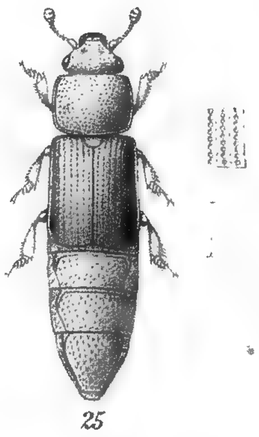
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2. " RECTISTRIATUS.
3. LITOLIBRUS SIGNATUS.
4. LITOCHRUS GLOBULUS.
5. OCHROLITUS OPTATUS.
6. ♂ MYSTROPS HETEROCERUS.
7. ♂, 8. ♀ " MEXICANUS.
9, 9a. ♂ " ROTUNDULUS.
10. MYSTROPS TEAPENSIS.
11. ♀ CYCHROPIESTUS CORVINUS.
12. ♀ COLASTUS POSTICUS.
13. ♂ " MIMETES.
14. ♂ " SETIGER.
15. ♂ " SIMPLEX.
16. " CHIRIQUENSIS.
17. ♀ " PUNCTIVENTRIS.
18. ♂ COLASTUS INFLATIPENNIS.
19. ♂ " ABERRANS.
20. ♂ BRACHYPEPLUS VICINUS.
21. ♂ " STAPHYLINOIDES.
22. " COSTATUS.
23. " NIGRIPENNIS.
24. " CONOTELOIDES.
25. ♂ " LISPINOIDES.

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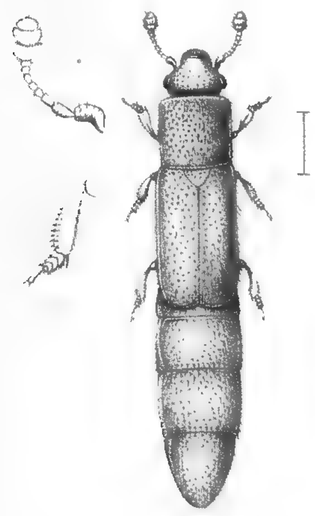
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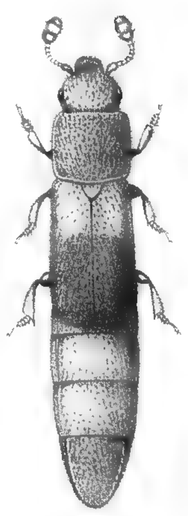
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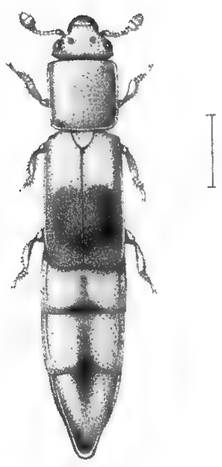
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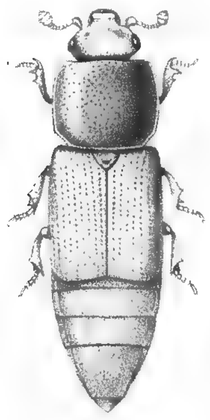
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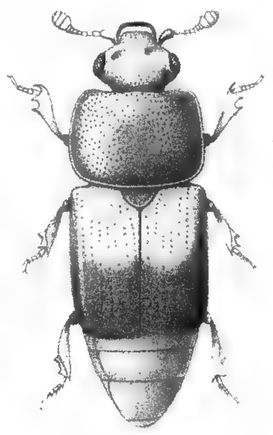
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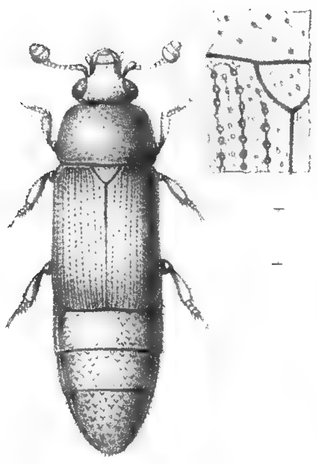
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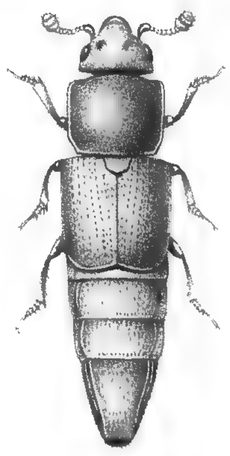
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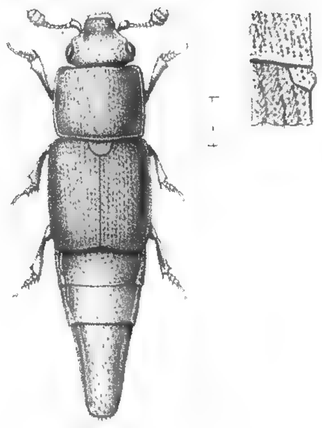
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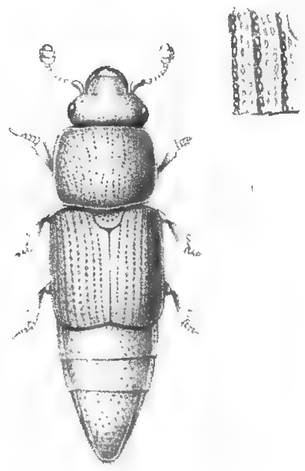
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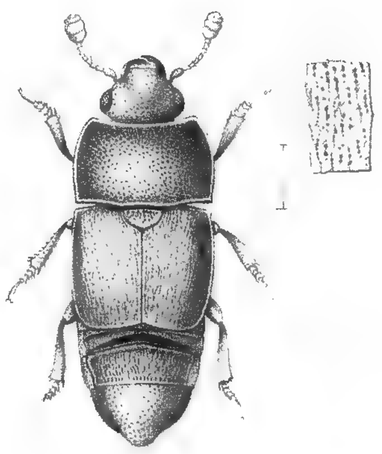
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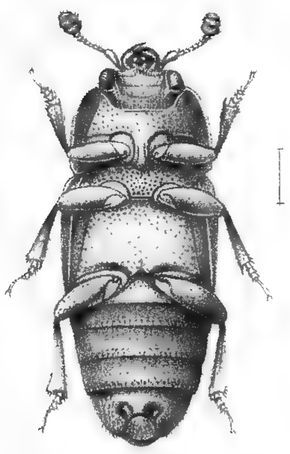
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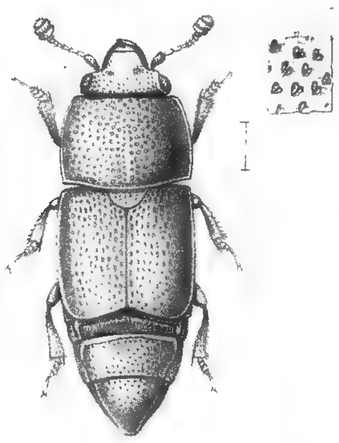
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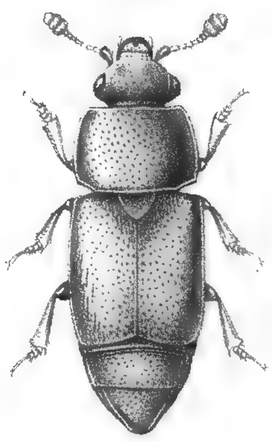
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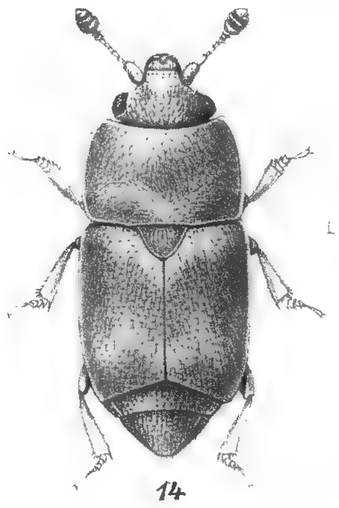
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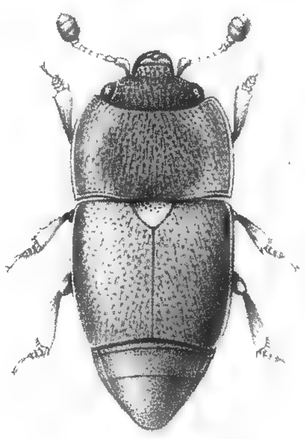
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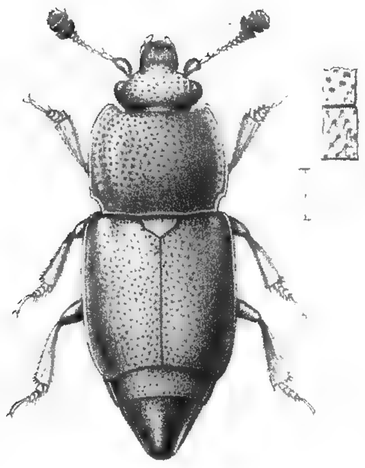
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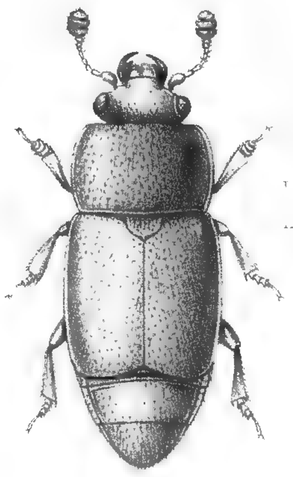
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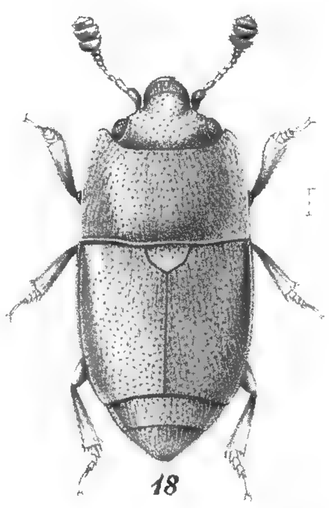
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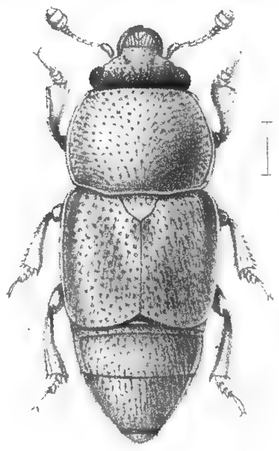
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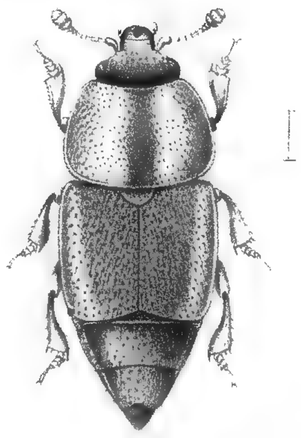
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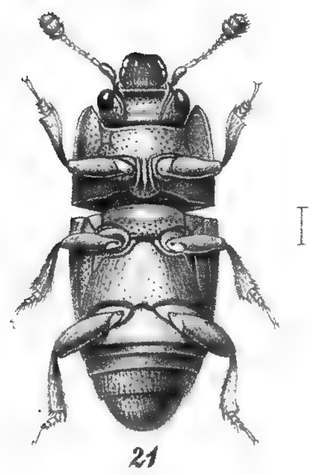
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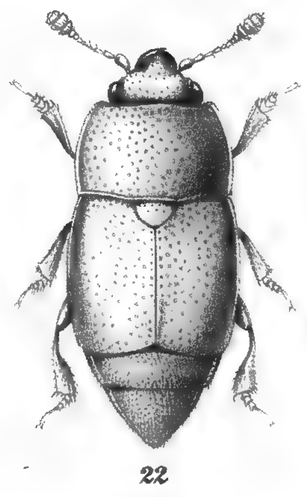
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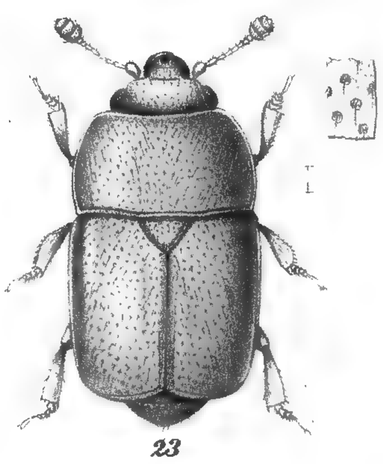
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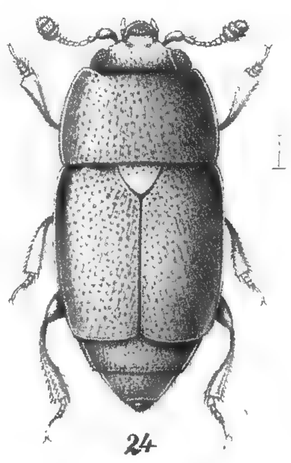
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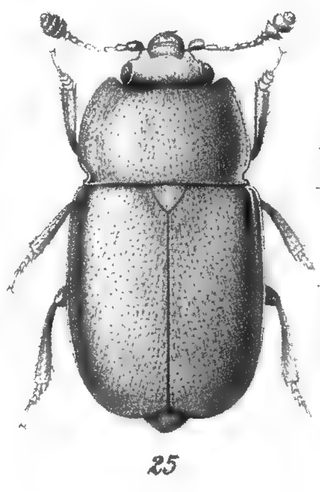
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1. CILLÆUS PROLONGATUS.
2. " ZUNILENSIS.
3. " PROLIXUS.
4♂ HALEPOPEPLUS POLITUS.
5. " OPTATUS.
6. MACROSTOLA PICEA.
7. CONOTELUS STENOIDES.
8♀ " NIGRICORNIS.
9. CONOTELUS CHIRIQUENSIS
10. CARPOPHILUS FUNEBRIS.
11. " LUGUBRIS.
12. " LACERTOSUS
13. " LIGNEUS.
14. " COMATUS.
15. " ELATERINUS.
16♀ " EPURÆOIDES.
17♂ " PALMATUS.
18. CARPOPHILUS ERICHSONI.
19. " LONGIVENTRIS.
20♂ " MEXICANUS
21♀ " SENILIS.
22♂ " DECEPTOR.
23. EUMYSTROPS CENTRALIS.
24♂ HAPTONCUS FLOREOLUS.
25♀ EPURÆA TORTICOLLIS.

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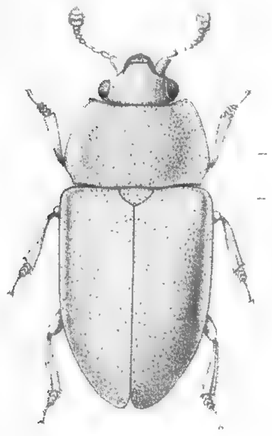
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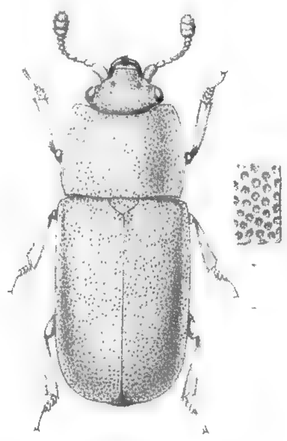
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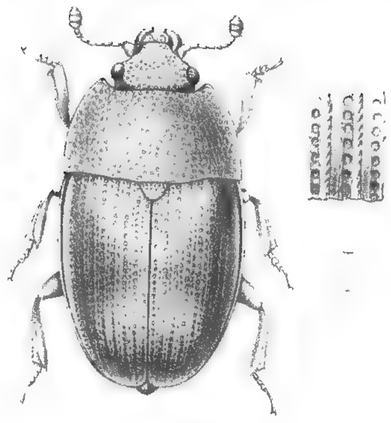
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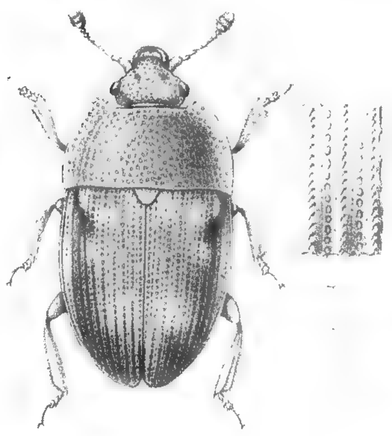
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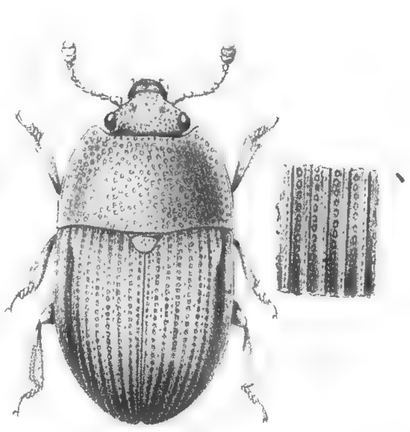
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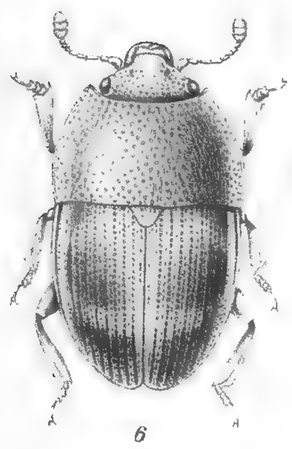
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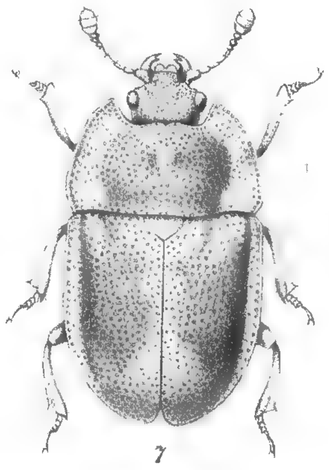
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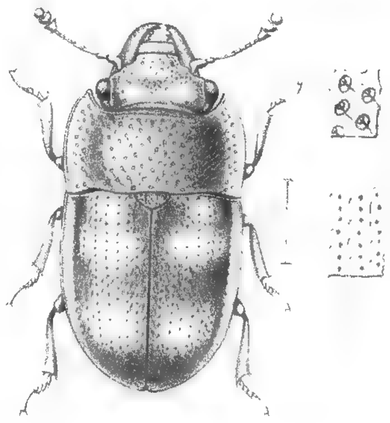
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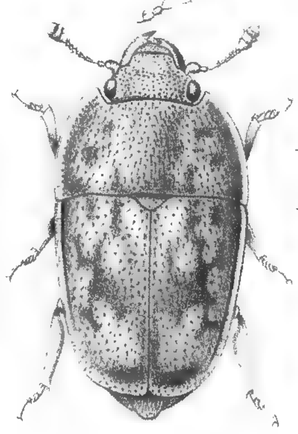
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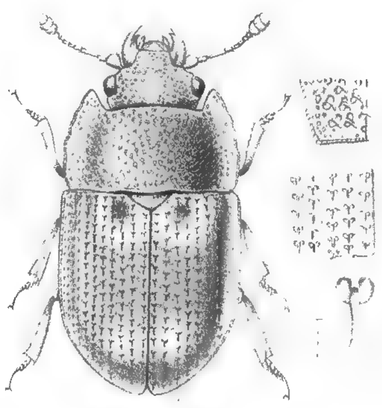
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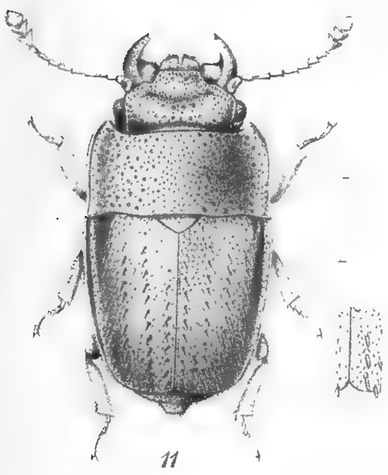
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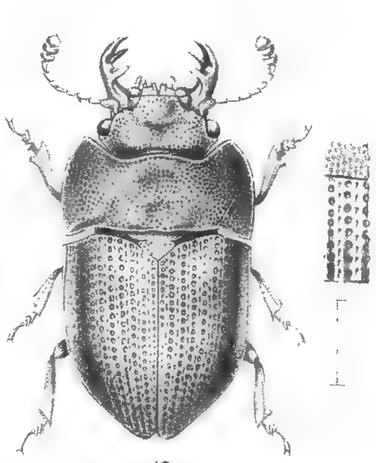
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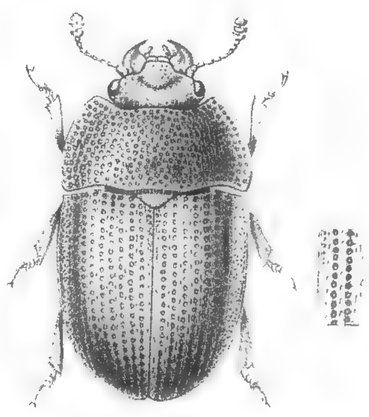
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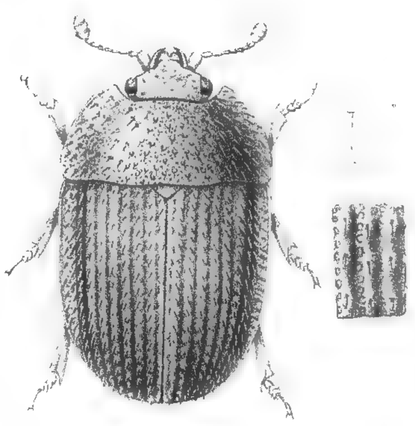
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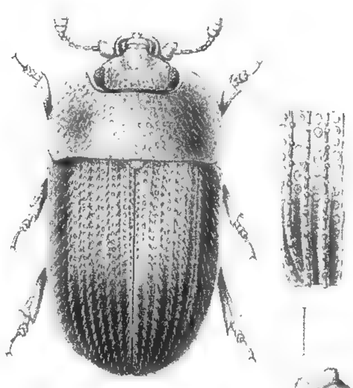
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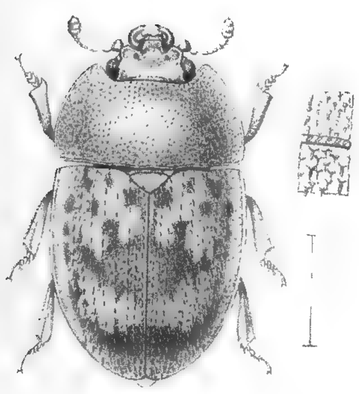
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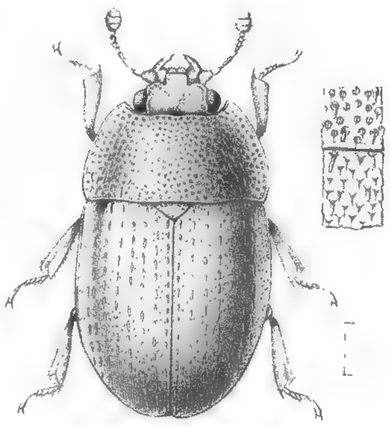
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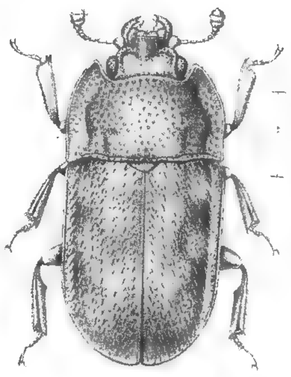
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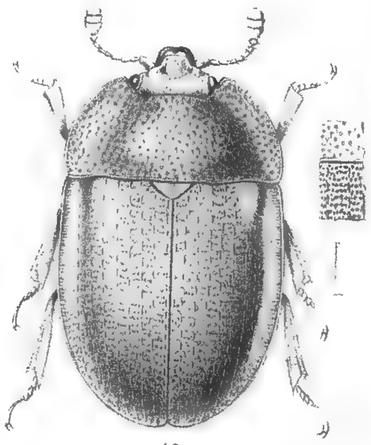
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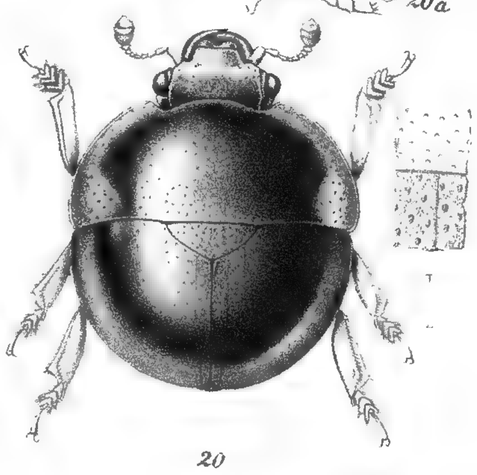
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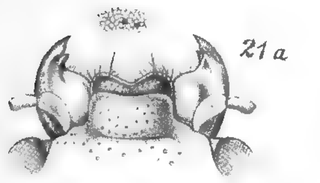
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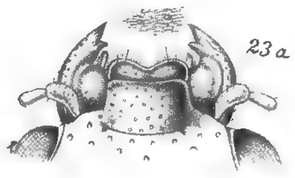
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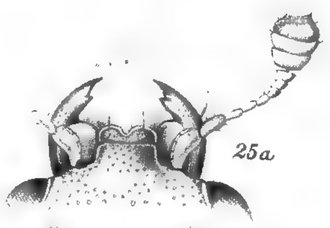
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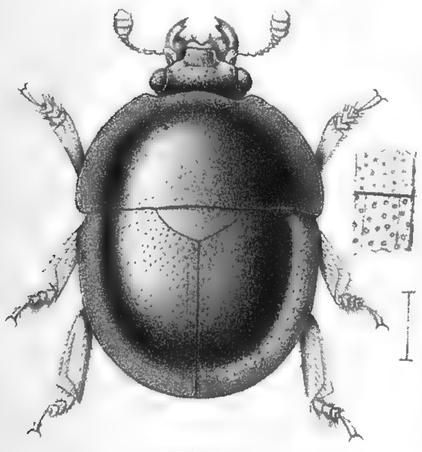
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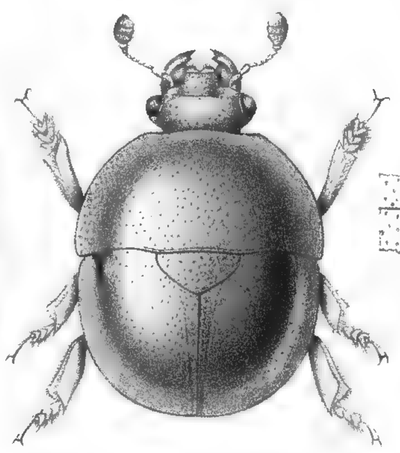
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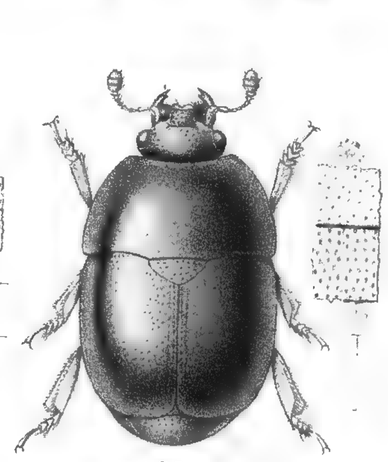
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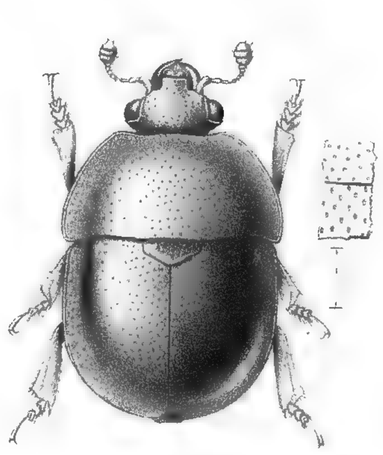
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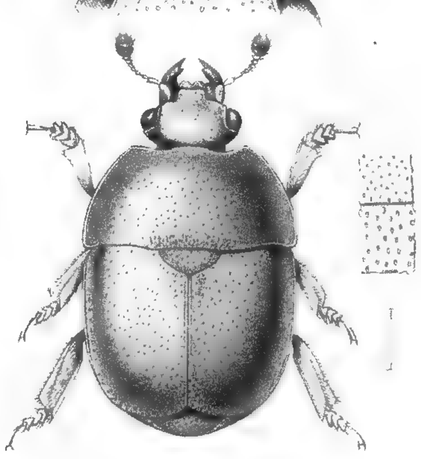
25

1.♀EPURÆA INTEGRA.
2.♂ " PROLIXA.
3.♀STELIDOTA PALLENS.
4. " OVALIS.
5.♀ " BUGABENSIS.
6.♂ " CHAMPIONI.
7.♀ " EXTRANEA.
8. PROMETOPIA PORCINA.
9. PROMETOPIA ÆQUALIS.
10. " SORONIOIDES.
11.♂PLATYCHORA LEBASI.
12.♂PSILOTUS ATRATUS.
13.♀ " MIMETES.
14. PERILOPA PUNCTIGERA.
15. " PLACIDA.
16. LOBIOPA RETUSA.
17.♂ " SIMULATRIX.
18.♂LOBIOPA DISCEDENS.
19. CACCONIA OBSCURA.
20.20a CAMPTODES FORMOSUS.
21,21a♀ " GAUMERI.
22.♀ " NICRICLAVA.
23,23a♀ " ABERRANS.
24.♀ " SOLITARIUS.
25,25a♂ " COGNATUS.

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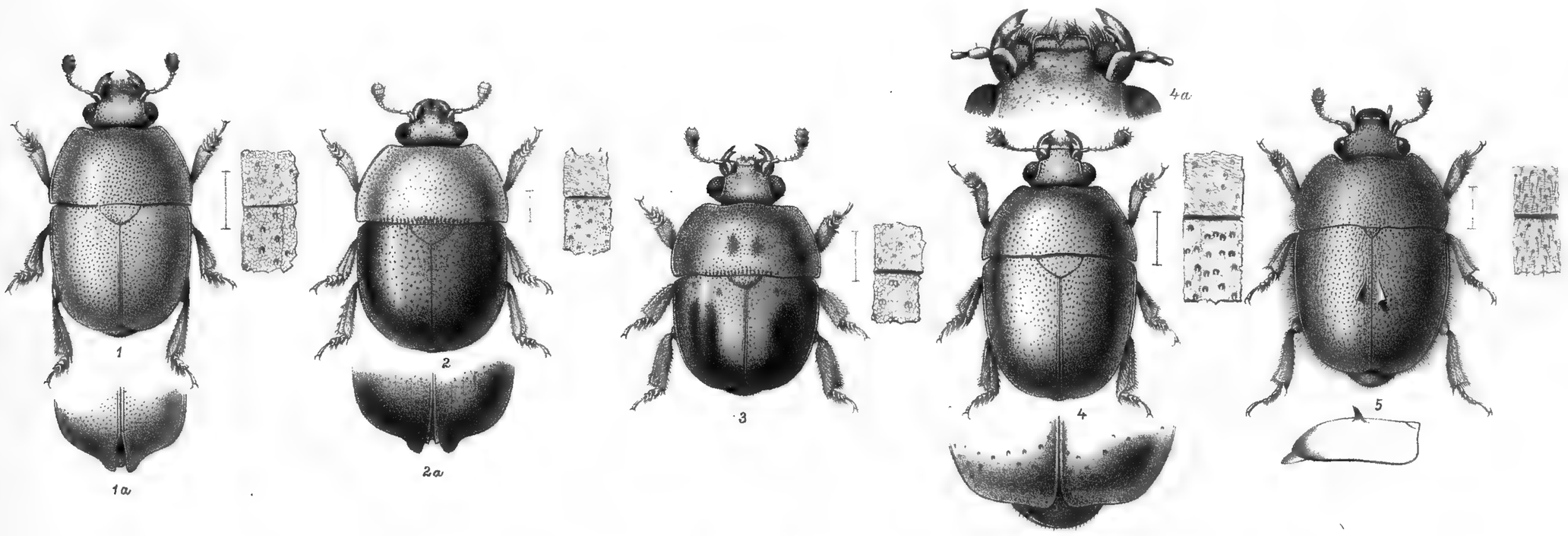

1.♂,1a♀ CAMPTODES BIFORMIS.
2♂,2a♀ " FURCATUS.
3♂ " LATIPES.
4♂,4a,b,♀ " CHIRIQUENSIS.
5♂ AMPHICROSSUS HORNI.
6 AETHINA CONCOLOR.
7 " QUADRATA.
8 POCADIUS HELVOLUS.
9 HEBASCUS BUGABENSIS.
10 " AURANTIACUS.
11 " ERINACEUS.
12 TEICHOSTETHUS VINOSUS.
13 " GUATEMALENUS.
14 STRONGYLUS UNICOLOR.
15,16 " LATERALIS.
17 " MIMETES.
18 MECYLLODES CLAVICORNIS.
19 MEONCERUS SALVINI.
20♂ SOMATOXUS SALLAEI.
21 " HYDROPOROIDES.
22♂ OXYCNEMUS ROSTROSUS.
23 PYCNOCNEMUS ANISOTOMOIDES.
24 PALLODES REVERSUS.
25♂ " STRONGYLIFORMIS.

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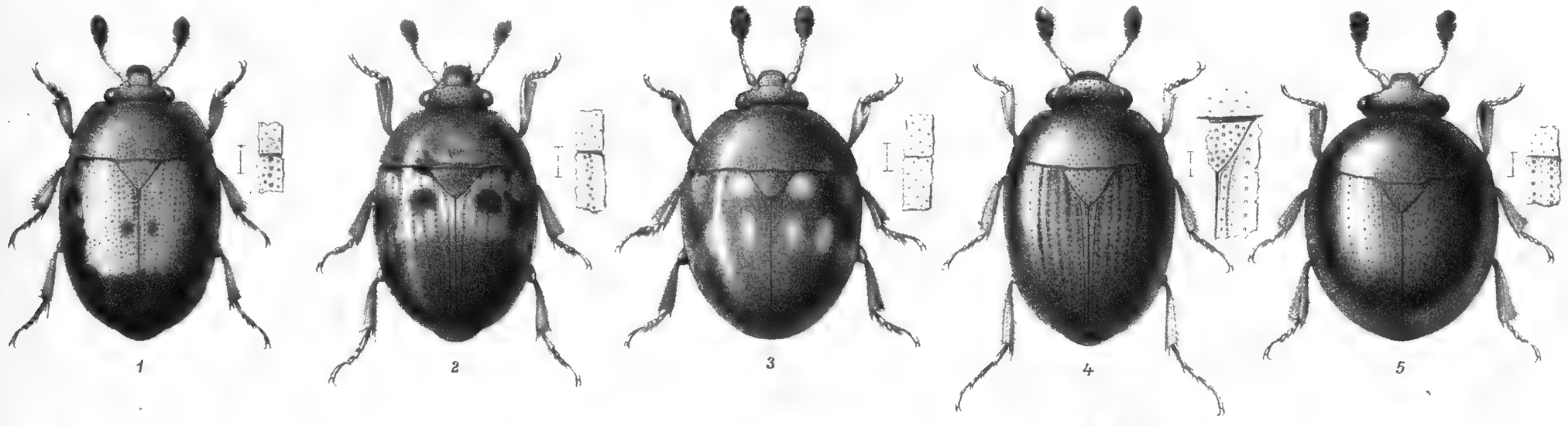
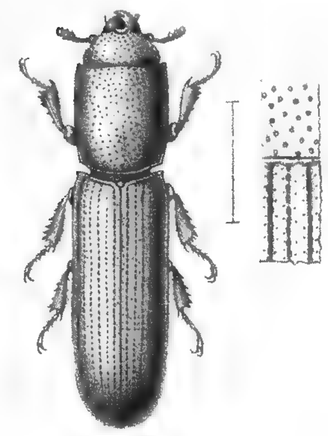
Vienna, Bannwarth Th. imp.



1. PALLODES SMITHI
2. " PICTUS.
3. " GUTTATUS.
4. " OBSCURUS.
5. EUSPHÆRIUS GODMANI
6, 6a. PYCNOCEPHALUS METALLICUS.
7. ♂ CRYPTARCHA LONGIDENS.
8. " NIGRA.
9. CRYPTARCHA INÆQUALIS.
10. " BREVIDENS.
11. " SUBTILIS.
12. " REGULARIS.
13. " PLENA
14. " PUNCTICEPS.
15. " DISCEDENS.
16. " ATOMARIA.
17. " ELONGATA.
18. ♂ LEPIARCHA OMOSITOIDES
19. ♂ LIARCHA PLACIDA.
20. PITYOPHAGUS INSIGNIS.
21. IPS ULTIMUS.
22. NEMOSOMA SIGNATUM
23. CYLIDRELLA MOLLIS.
24, 24a. CORTICOTOMUS BASALIS.
25. COLYDOBIUS DIVISUS.

M. Freih. v. Schlereth.

Vienna, Bannwarth Th. imp.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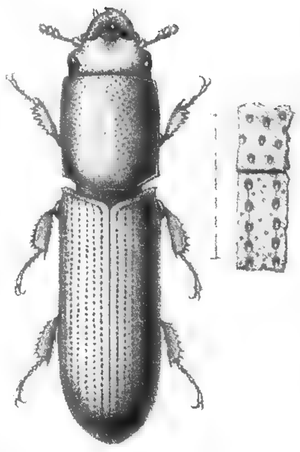
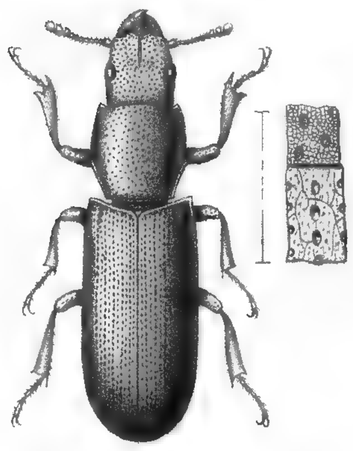
1a.


2

2a.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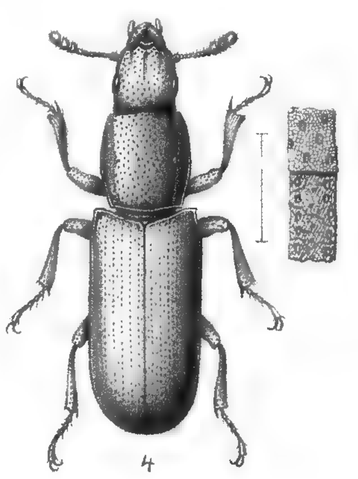
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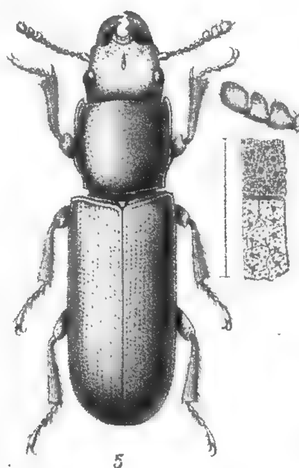
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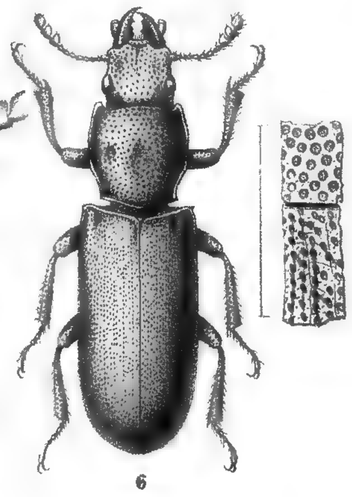
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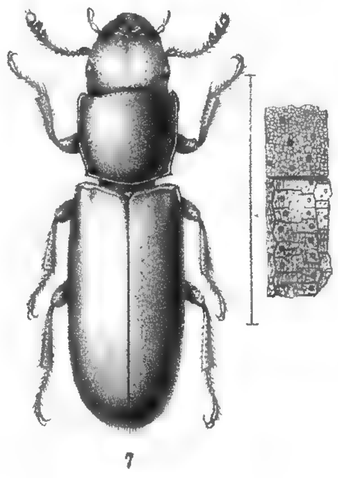
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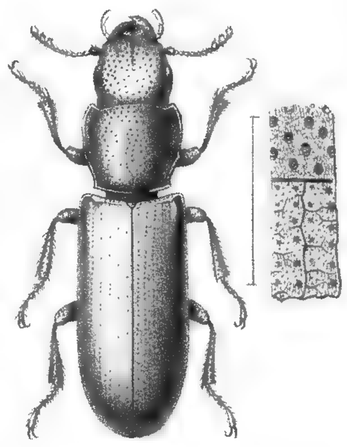
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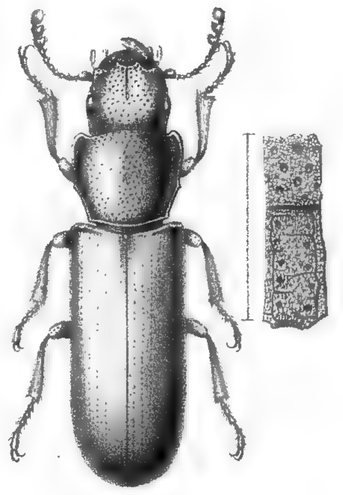
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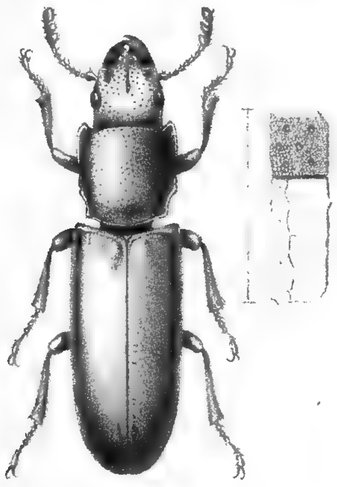
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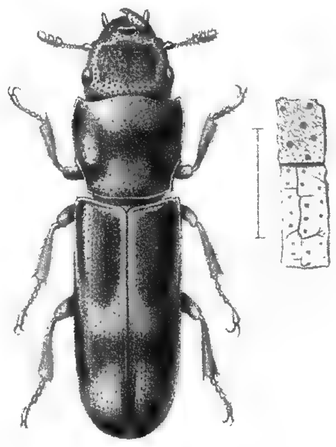
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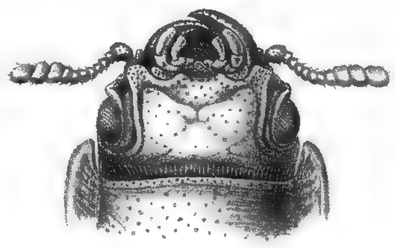
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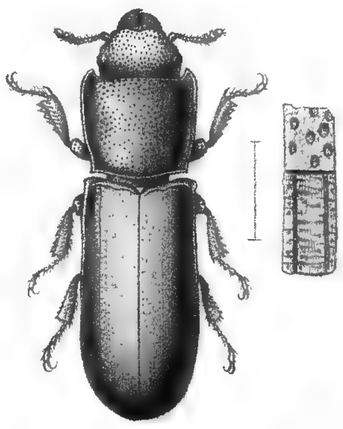
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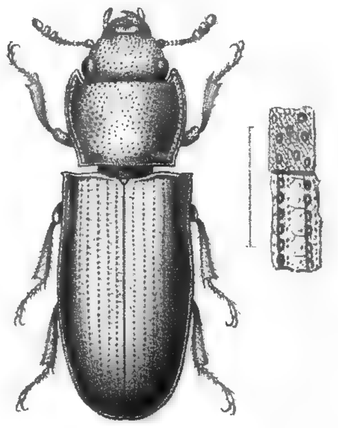
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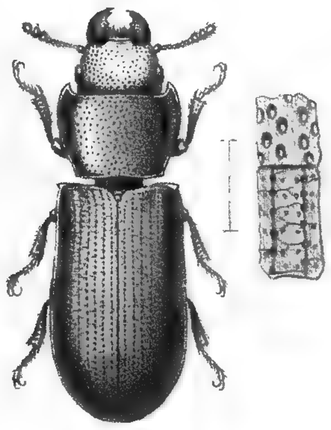
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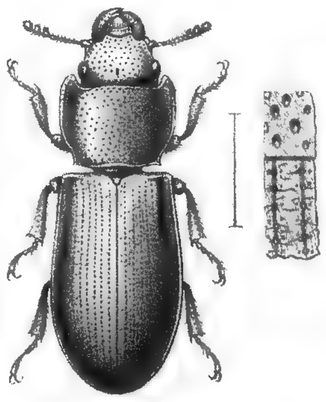
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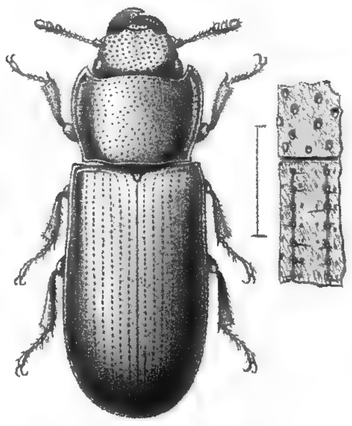
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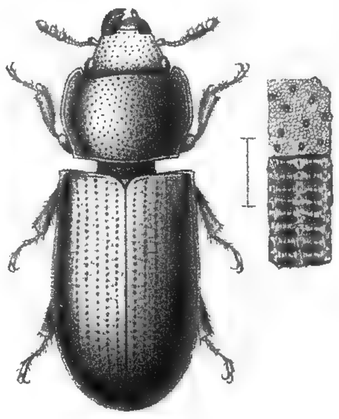
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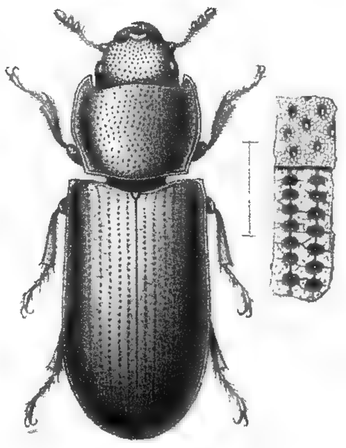
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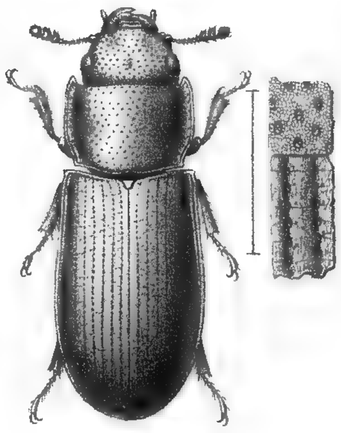
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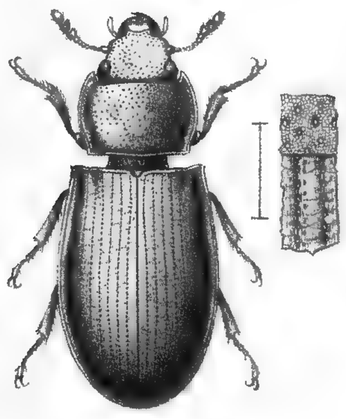
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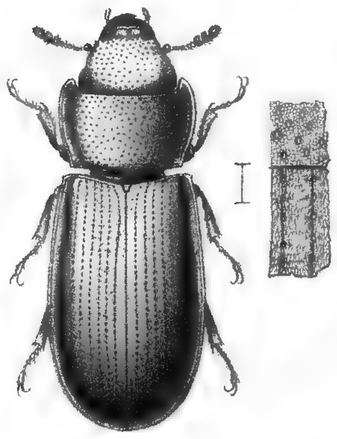
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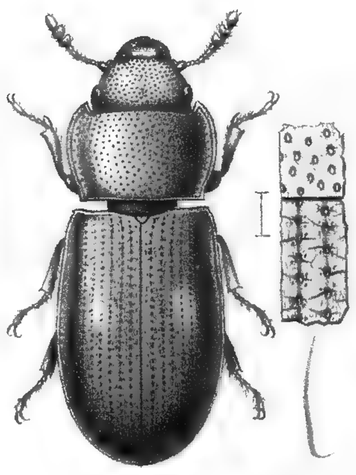
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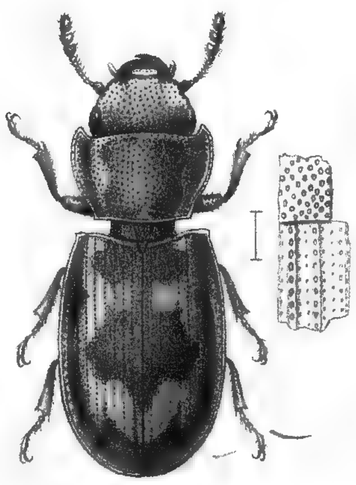
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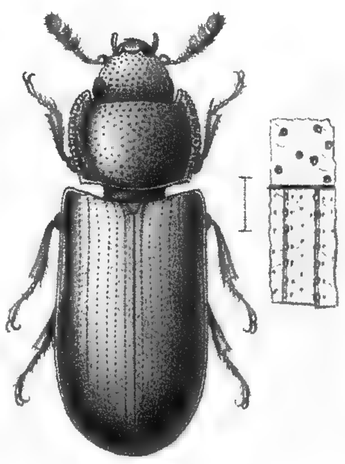
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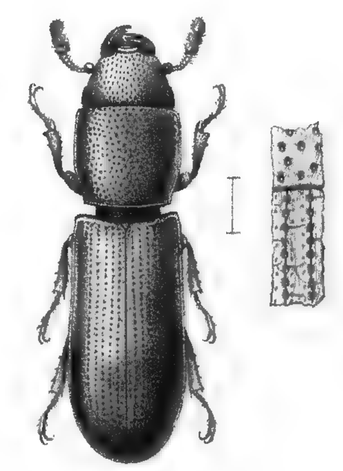
25

1, 1a AIRORA YUCATANICA.
2, 2a » CENTRALIS.
3, 3a TEMNOCHILA DIGITATA.
4 » LEVEILLANI.
5, 5 a,b. » QUADRICOLLIS.
6 » SALVINI.
7 » MIRANDA.
8 » SULCIFRONS.

9 TEMNOCHILA SMITHI.
10 » CHAMPIONI.
11 » CHIRIQUENSIS.
12, 12 a EUPYCNUS LENTUS.
13 TENEBROIDES CELATUS.
14 » SONORENSIS.
15 » UNDULATUS.
16 » MARGINICOLLIS.
17 » GODMANI.

18 TENEBROIDES HELOPHORUS.
19 » POLLENS.
20 » EXPLANATUS.
21 » GRACILIPES.
22 » BIMACULATUS.
23 » COMPLICATUS.
24 » FULGENS.
25 » ZAPOTENSIS.

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1,1a,b SYNTELIA WESTWOODI.
2 SYNTELIA MEXICANA.
3, 3a ADIMERUS CRISPATUS.
4 ADIMERUS SETOSUS.
5 LABROTRICHUS ABERRANS.
6, 6a DISTAPHYLA GIBBICEPS.
7, 7a ASYNCHITA GRANOSA.
8 SYNCHITA MIMETES.
9 ENDEITOMA MEXICANA.
10 ENDEITOMA PANAMENSIS.
11 PHLOEONEMUS ADHAERENS.
12 ACOLOBICUS OBSCURUS.
13 EUCICONES PERFECTUS.
14 HYSTRICONES ARMATUS.
15 DITAPHRUS CHAMPIONI.
16 ANEUMESA COSTATA.
17 MICROSICUS SETOSUS.
18 CATOLAEMUS MINUTUS.
19 BITOMA EXARATA.
20 BITOMA JEJUNA.
21 BITOMA PASCOEI.
22 XUTHIA BREVIPES.
23 LADO ELEGANS.
24 LADO FUNESTUS.
25 LASCONOTUS SULCIFER.
26, 26a COLYDIUM GODMANI.
27 COLYDIUM CHAMPIONI.

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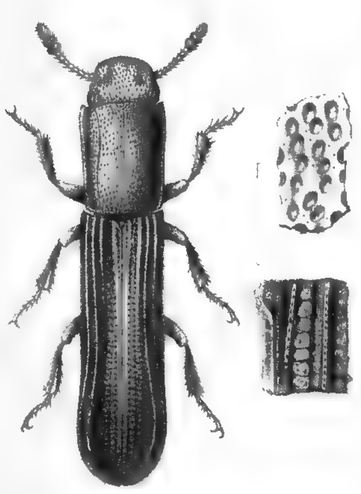
Vienna, Braumwarth Th. imp.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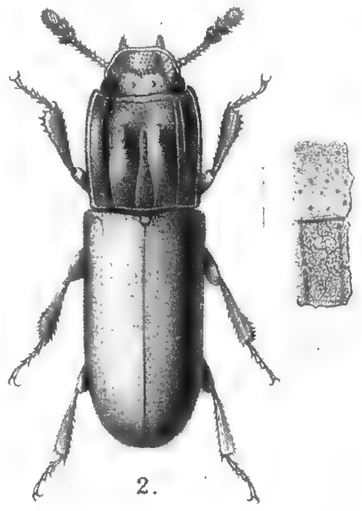
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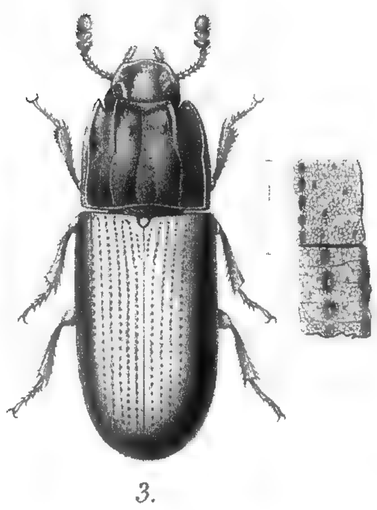
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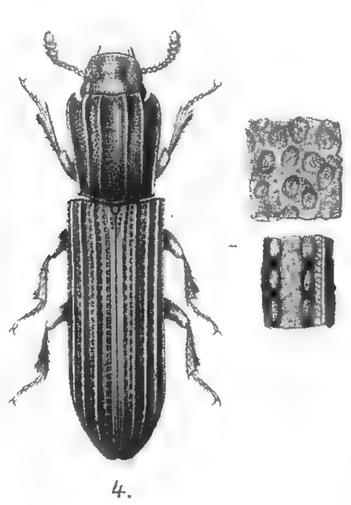
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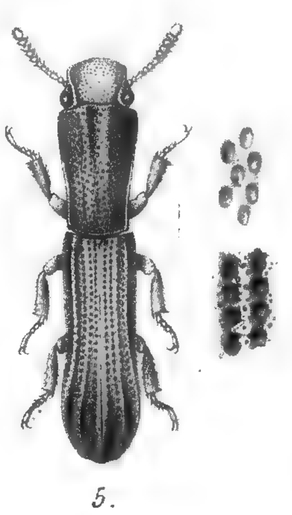
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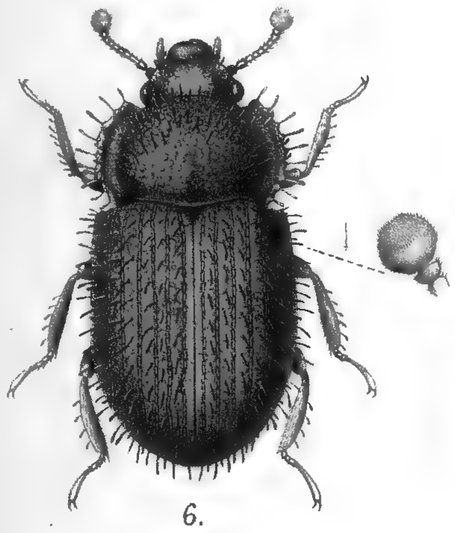
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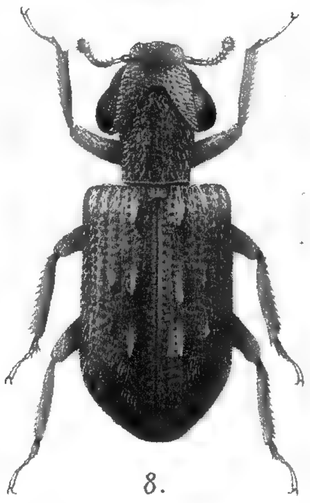
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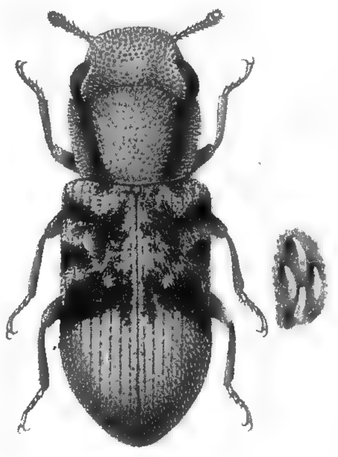
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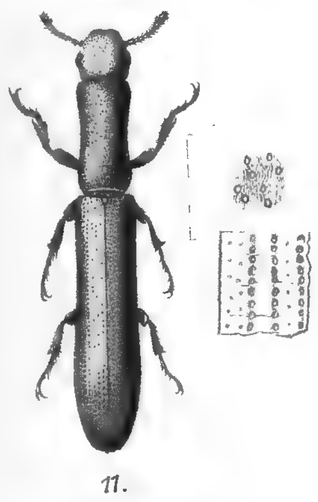
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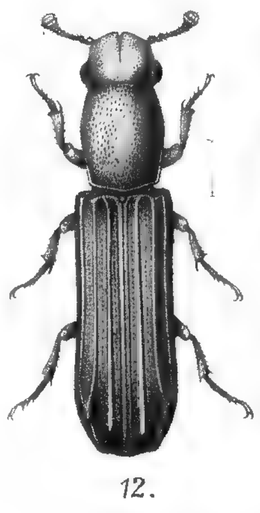
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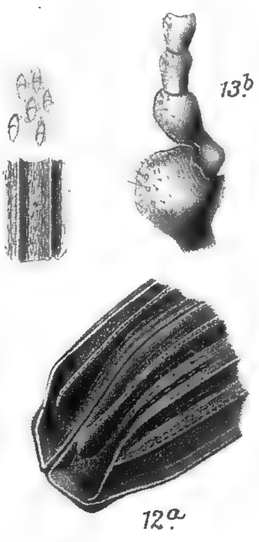
12a 13b

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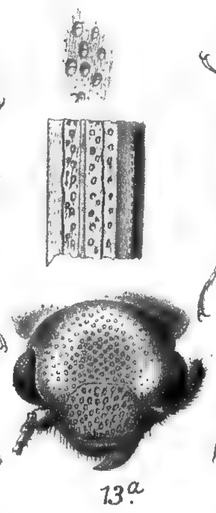
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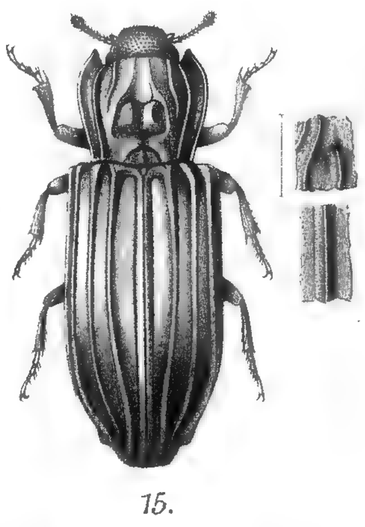
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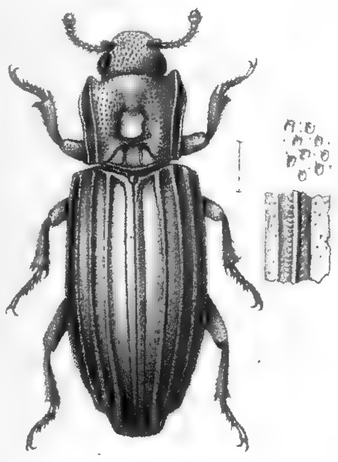
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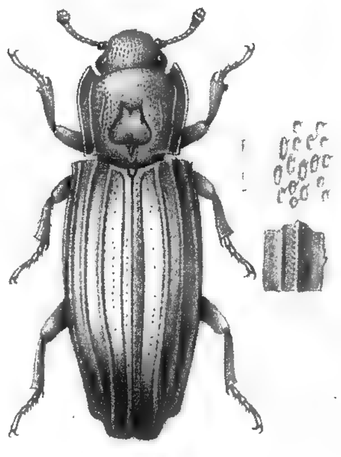
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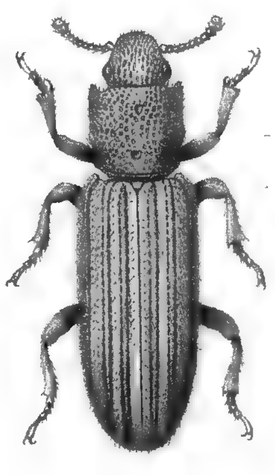
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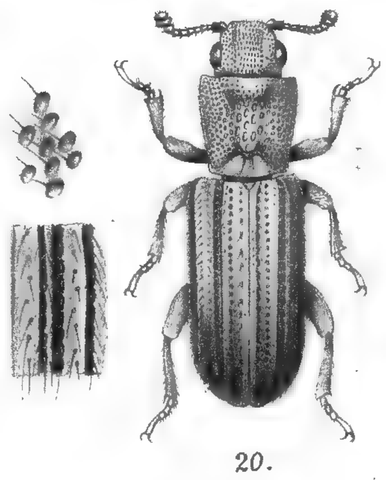
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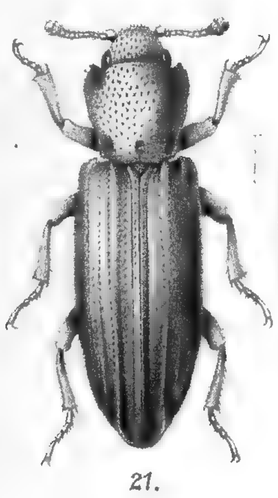
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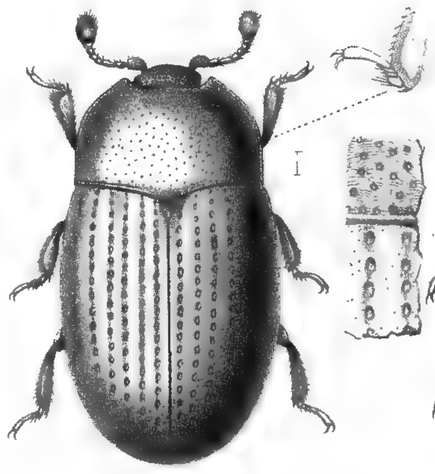
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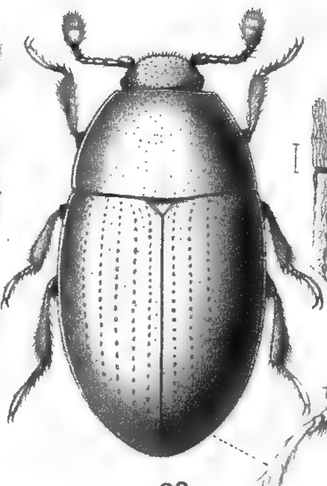
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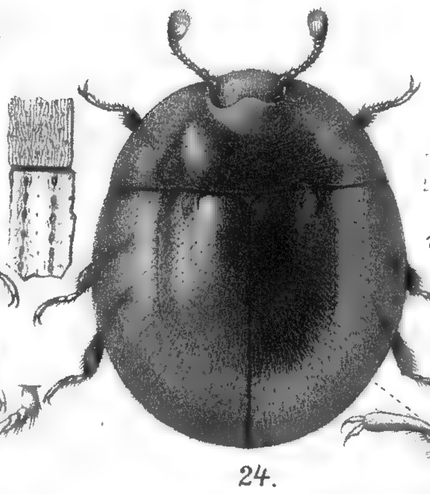
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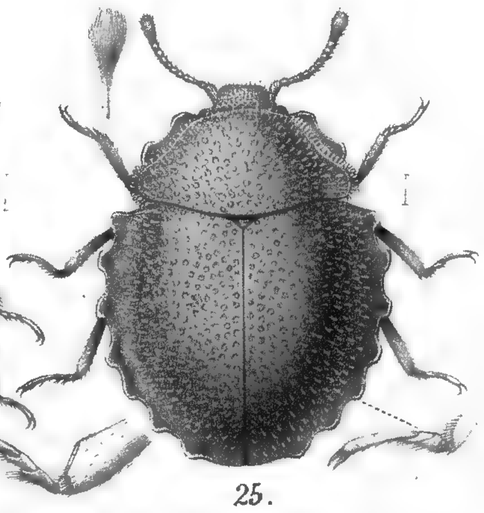
25.

1	COLYDIUM CLAVIGERUM.	9	ACROPIS RECTA.	18	LITHOPHORUS GEMMIFER.
2	AULONIUM FRONTALE.	10	ETHELEMA DECORATA.	19	BOTHRIDERES SETIGER.
3	AULONIUM BELTI.	11	NEMATIDIUM FRYANUM.	20	BOTHRIDERES PARVULUS.
4	ANARMOSTES ARGUTUS.	12,12a	SOSYLUS TERMINALIS.	21	TAPHRIDERES ALTERNANS.
5	ENDESTES SCULPTURATUS.	13,13a,b	SOSYLUS SIMPLEX.	22	LAPETHUS DISCRETUS.
6	CACOTARPHIUS COMPRESSUS.	14	SOSYLUS SALVINI.	23	LYTOPEPLUS COMPACTUS.
7	PYGNOMERUS BREVICEPS.	15	PROLYCTUS SCULPTICOLLIS.	24	DISCOLOMA HUMERALE.
8	ACROPIS CHAMPIONI.	16	PROLYCTUS SIGNATUS.	25	HOLOPHYGUS CELATUS.
		17	PROLYCTUS ANNECTENS.		

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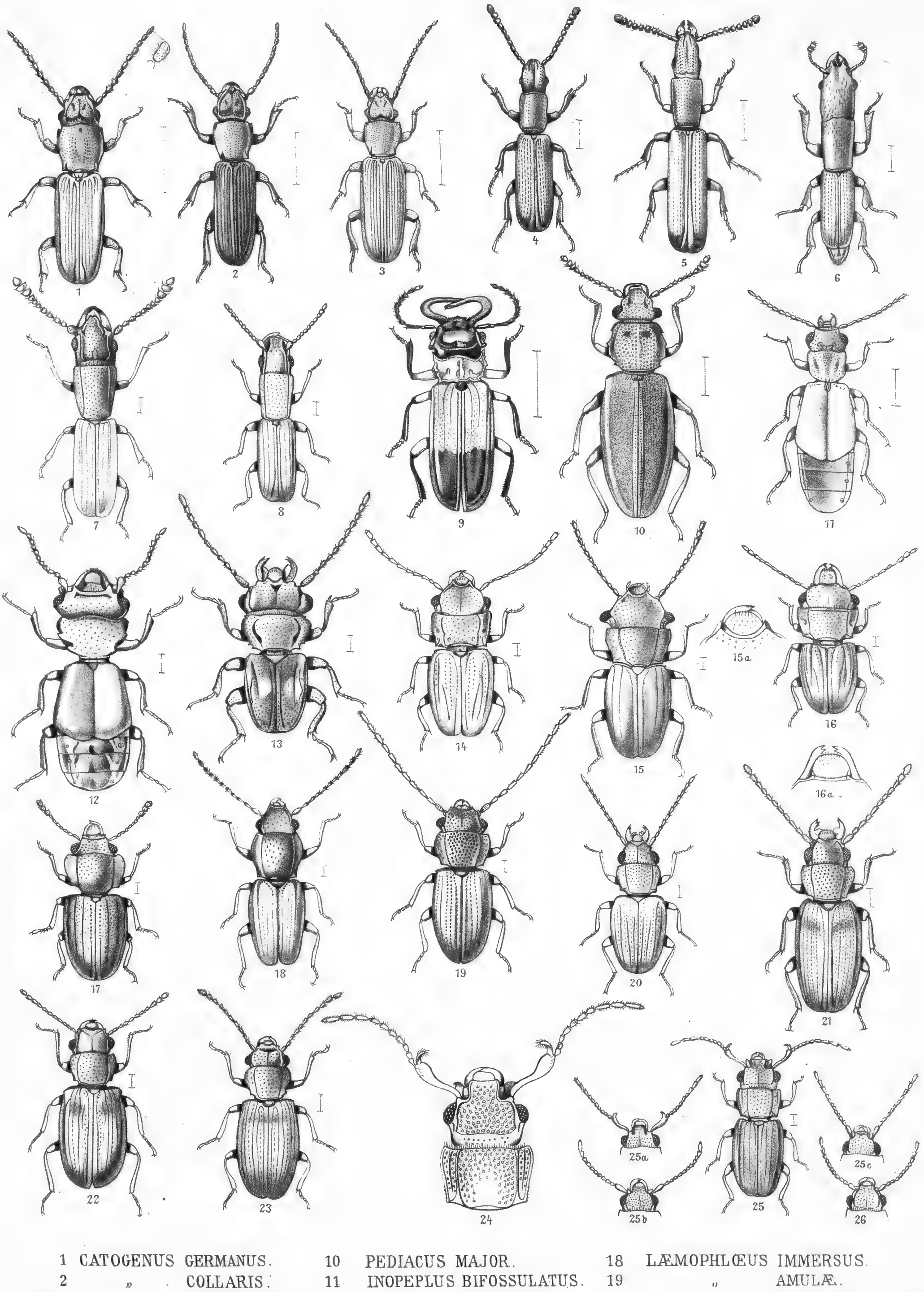
Vienna, Banmwarth Thimp.



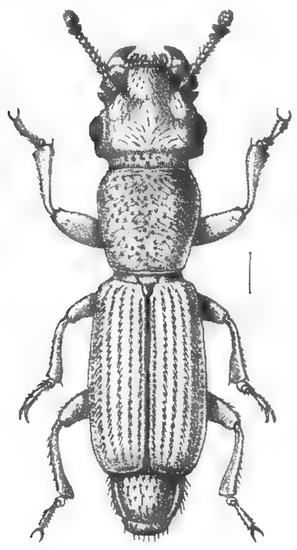
1	CATOGENUS GERMANUS.	10	PEDIACUS MAJOR.	18	LÆMOPHLŒUS IMMERSUS.
2	„ COLLARIS.	11	INOPEPLUS BIFOSSULATUS.	19	„ AMULÆ.
3	„ PUNCTICOLLIS.	12	„ JUGULARIS.	20	„ CELATUS.
4	SYSSITOS ADDENDUS.	13	LÆMOPHLŒUS GERMAINI.	21♀	„ INSOLITUS.
5	„ ROSTRATUS.	14	„ BREVICEPS.	22	„ CORPORALIS.
6	THIONE CHAMPIONI.	15,15a	„ BOOPS.	23	„ DISTANS.
7	PARAPHLŒUS CRASSICEPS.	16,16a	„ MINUTUS.	24♂	„ ADDENDUS.
8	„ LONGICOLLIS.	17	„ CLAVICORNIS.	25,25a–c♂	„ ITERATUS.
9	PALAESTES ABRUPTUS.			26♀	„ „

E.Wilson del. Th.Bannwarth, lith.et imp.Vienna.

1 ♂ LÆMOPHLŒUS DISTINGUENDUS.
2, 2a ♂, 2b ♀ „ SUTURALIS.
3 ♂ „ DIVES.
4 ♂ RHABDOPHLŒUS CHIRIQUENSIS.
5 RHINOPHLŒUS NASUTUS.
6 RHINOMALUS SIGNATUS.
7 „ ANTHRACINUS.
8 PARANDRITA STIPES.
9 SILVANOPHLŒUS INFIMUS.
10 ♂ SILVANOPHLŒUS FRAUDATOR.
11 ♂ DEINOPHLŒUS DUCALIS.
12 „ SINUATUS.
13, 13a ♂ PLATAMUS DISPAR.
14 ♀ „ „
15 EUPLATAMUS DEBILIS.
16 „ LONGICORNIS.
17 TELEPHANUS SIMPLICICOLLIS.
18 „ GRACILICORNIS.
19 TELEPHANUS DROMIOIDES.
20 „ BRONTOIDES.
21 „ SETULOSUS.
22 NAUSIBIUS BREVICORNIS.
23 „ SILVANOIDES.
24 SYNOBIUS LOBICOLLIS.
25 ♂ CATHARTUS CASSIÆ.
26 SILVANUS CONSORS.
27 „ PERFORATUS.

E. Wilson del.

Th. Bannwarth, lith. et imp. Vienna.



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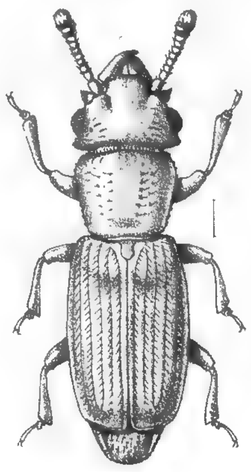

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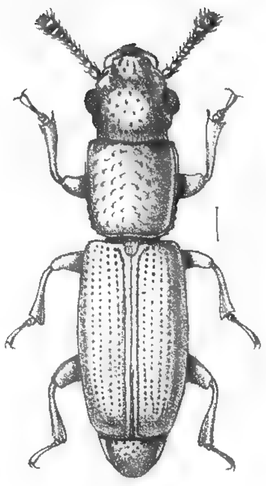

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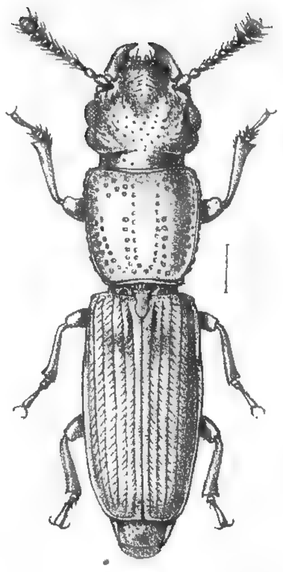

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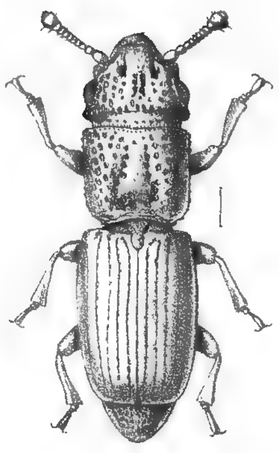

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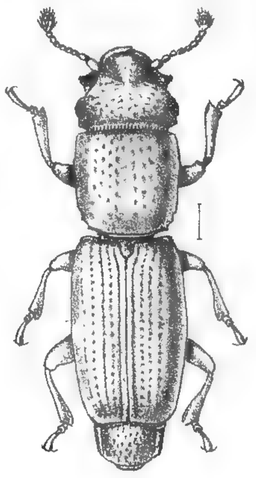

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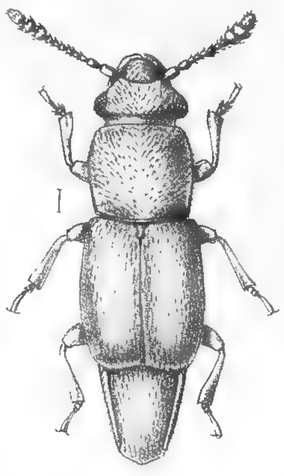

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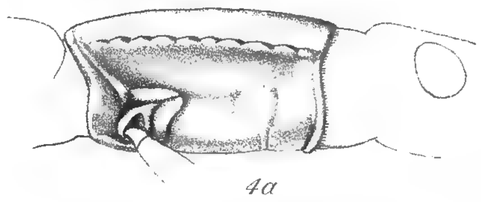

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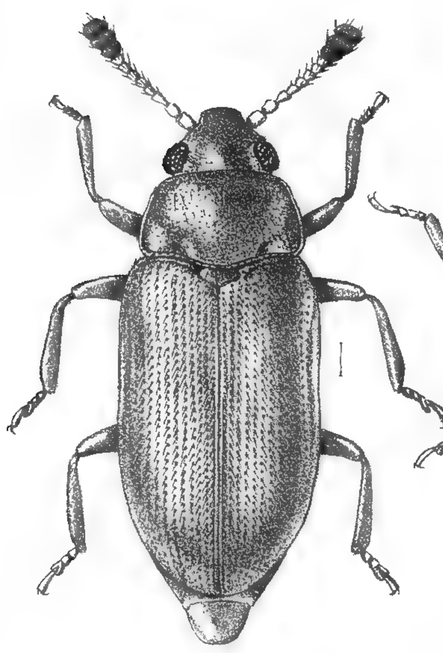

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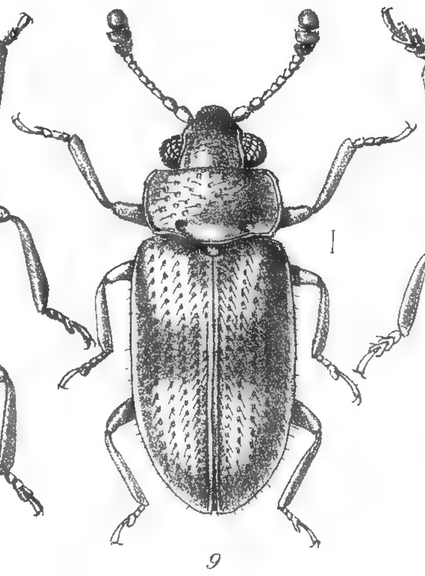

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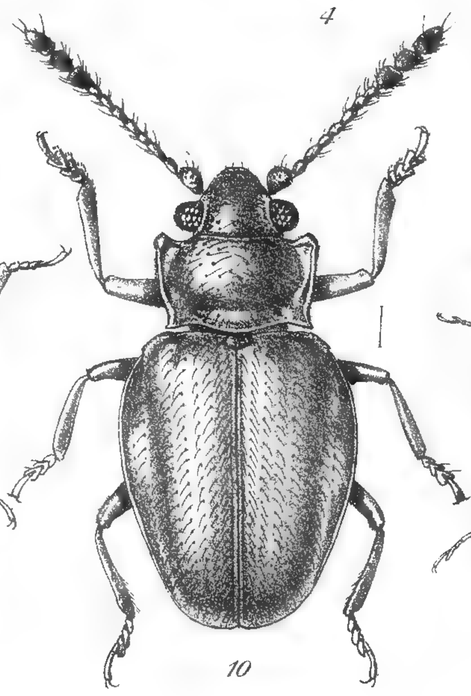

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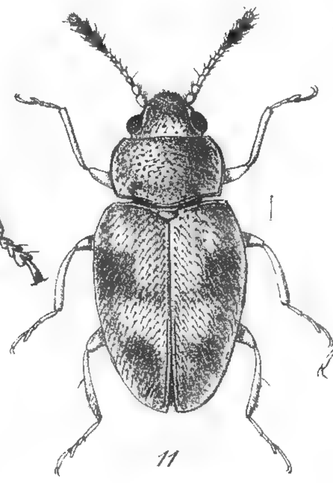

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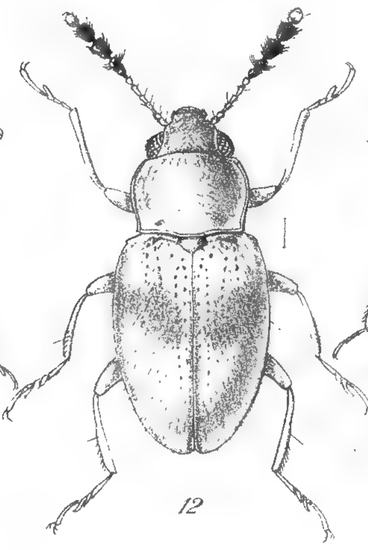

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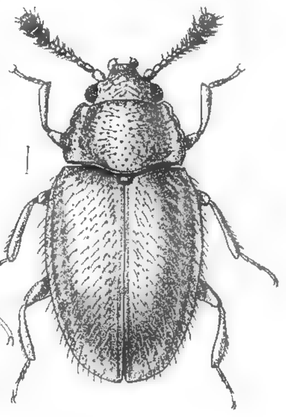

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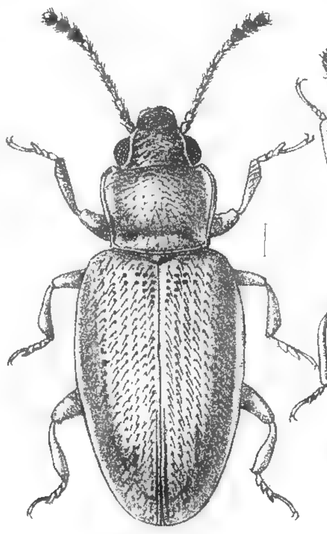

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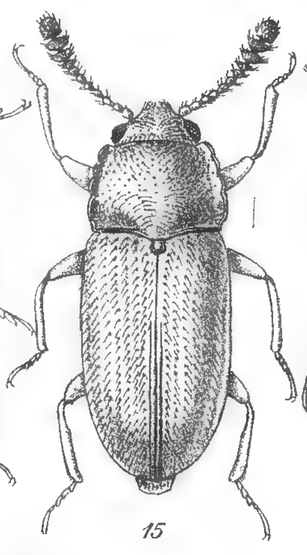

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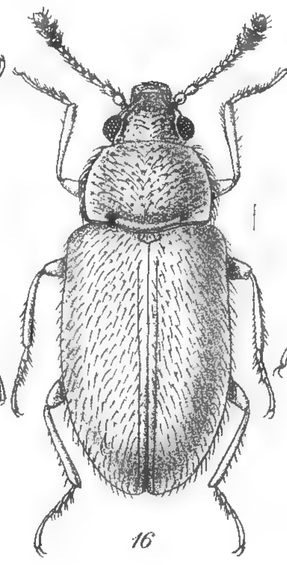

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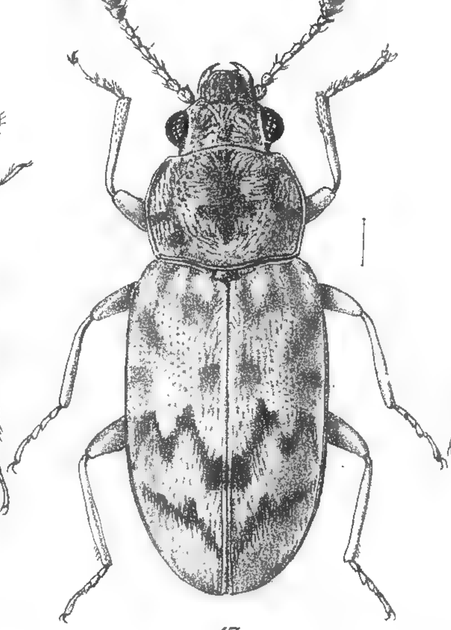

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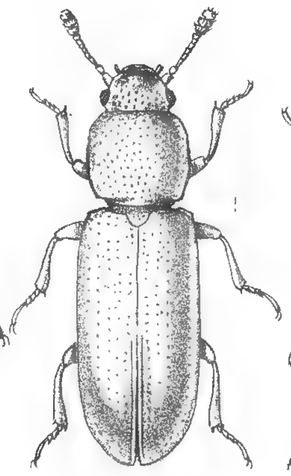

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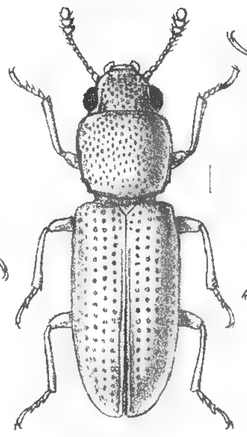

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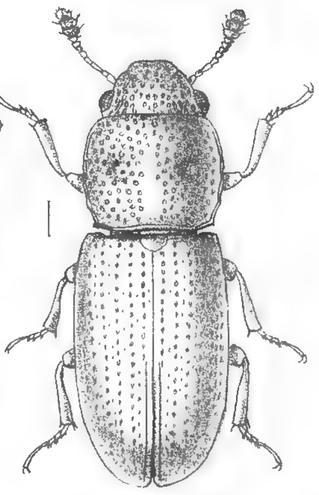

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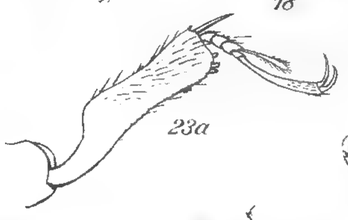

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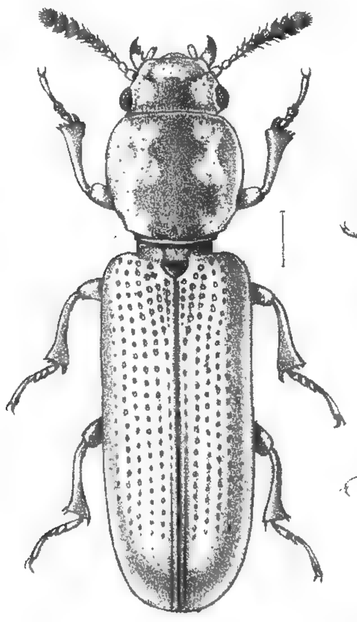

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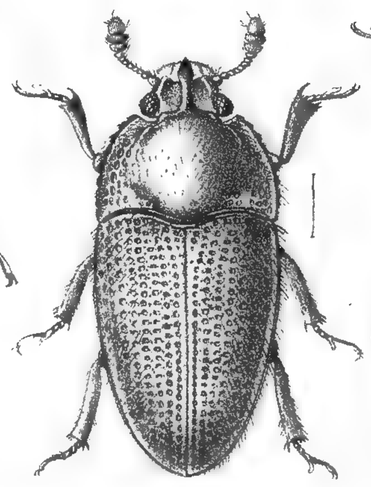

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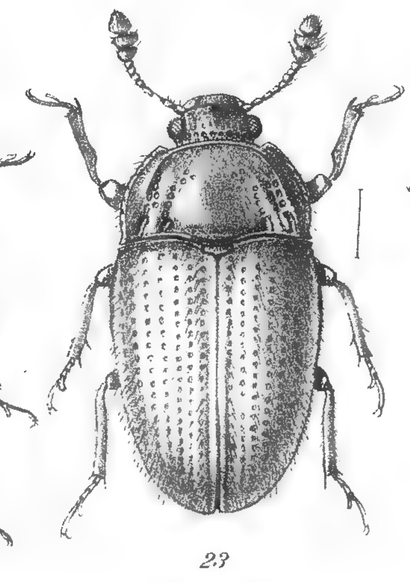

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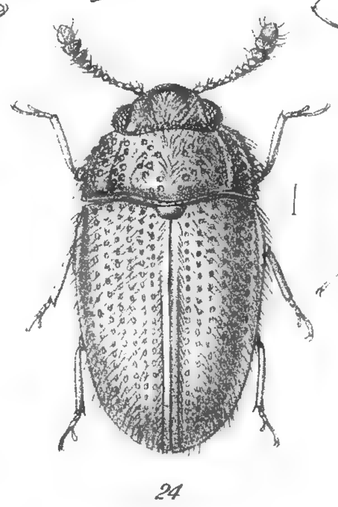

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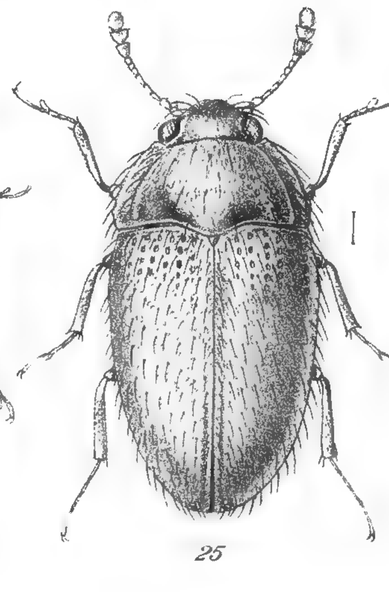

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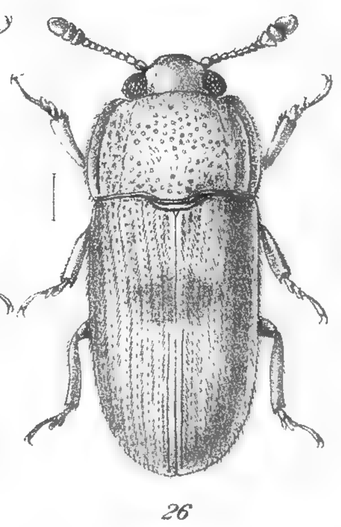
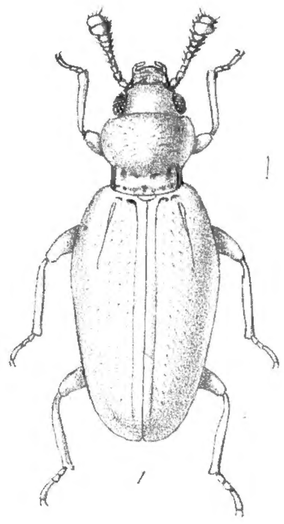


26

1 HESPEROBÆNUS STIPES.
2 EUROPS OXYTELUS.
3 „ LONGULUS.
4,4a ANEUROPS CHAMPIONI.
5 BACTRIDIUM RUDE.
6 „ EUMORPHUM.
7 TISIPHONE CHONTALENUS.
8 TELMATOSCIUS CLAVIGER.
9 LOBERUS BREVICOLLIS.
10 PLATOBERUS LATUS.
11 TOMARUS DEBILIS.
12 „ HETEROCERUS.
13 EMPOCRYPTUS OVALIS.
14 CŒLOCRYPTUS DISCEDENS.
15 PSEUDHENOTICUS PARALLELUS.
16 HENOTICUS LOBERINUS.
17 OTHNIOCRYPTUS VARIEGATUS.
18 HOLOSTERNUS DISTANS.
19 ANEPSICUS BRUNNEUS.
20 CISSOCRYPTUS INSOLITUS.
21 TROGOCRYPTUS NIGRIPECTUS.
22 ♂ GONICŒLUS UNICORNIS.
23,23a „ PARNOIDES.
24 DIPLOCŒLUS PARVUS.
25 EUDEROPUS CHAETOPHORUS.
26 ANOBOCŒLUS CHAMPIONI.

E.Wilson.del.et lith.Cambridge.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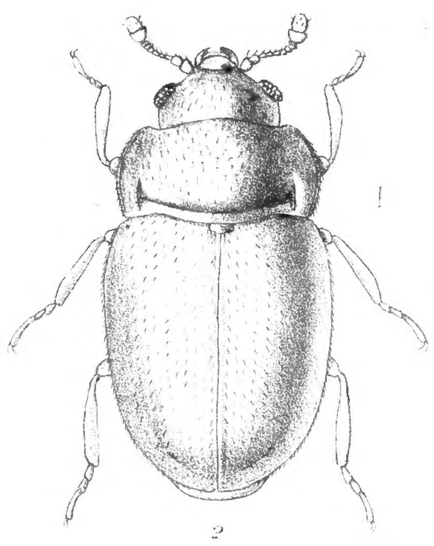
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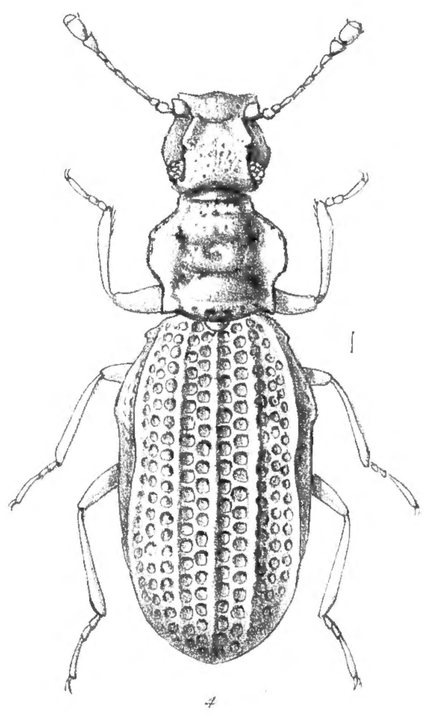
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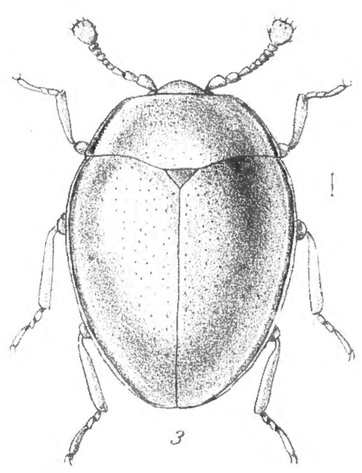
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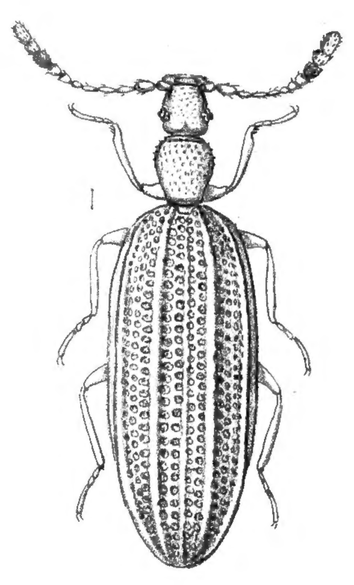
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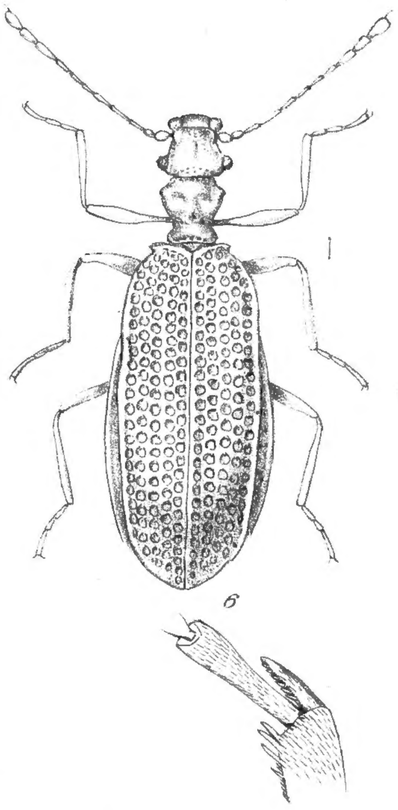
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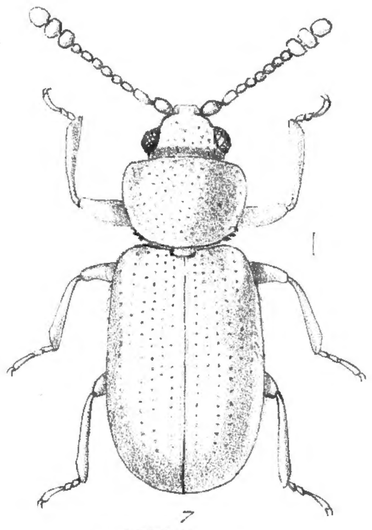
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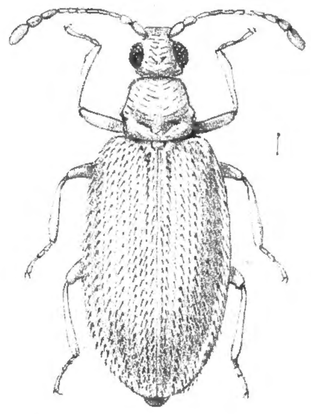
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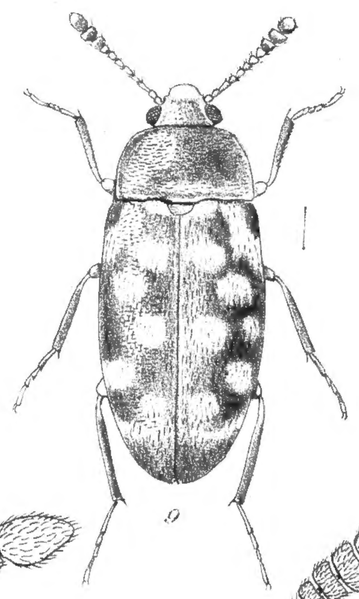
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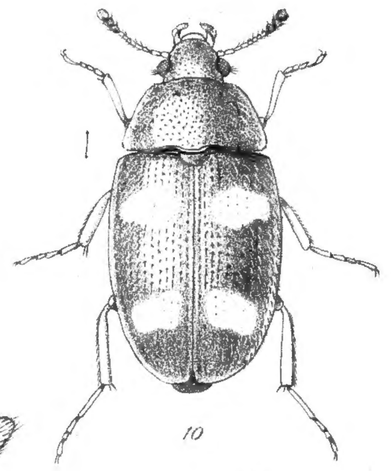
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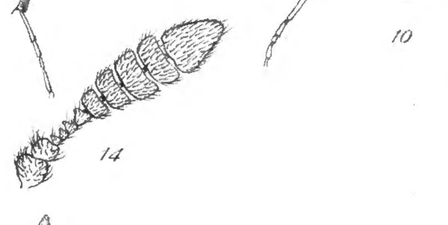
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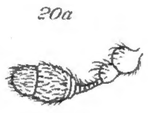
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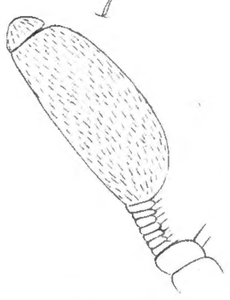
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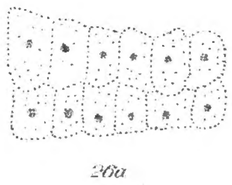
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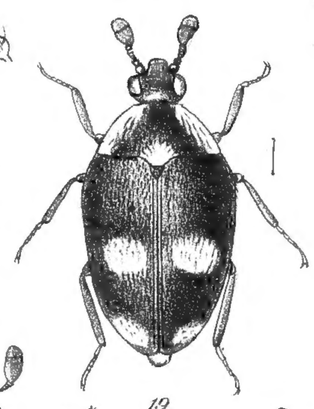
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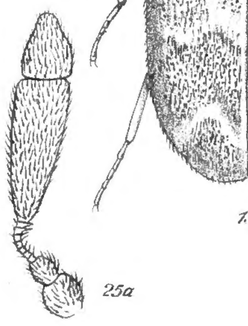
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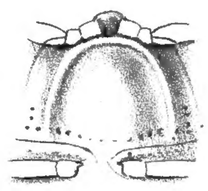
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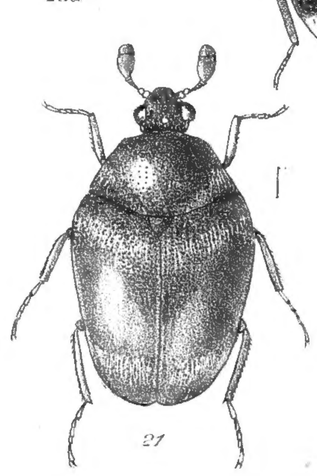
15a

15b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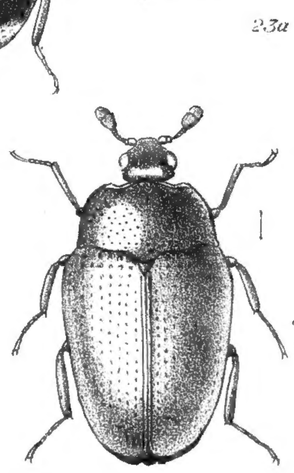
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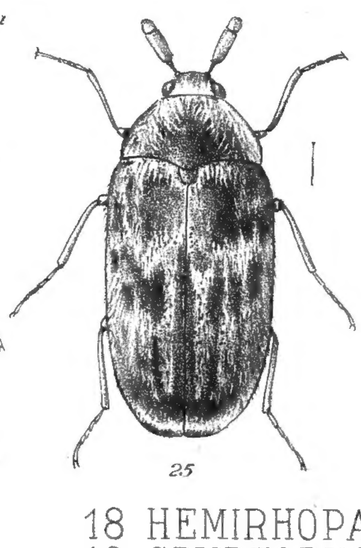
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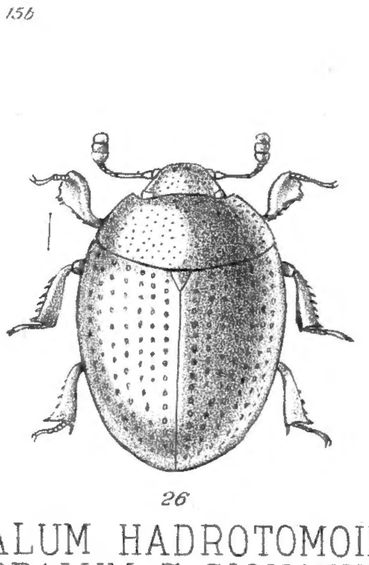
26

1 HOLOPARAMECUS BROSCIFORMIS.
2 EVOLOCERA CHAMPIONI.
3 FALLIA SYNTHETICA.
4 CARTODERE FALLIANA.
5 ADISTEMIA WATSONI.
6 BELONIA UNICOSTATA.
7 CORTICARIA HUMILIS.
8 MELANOPHTHALMA CENTRALIS.
9 TRIPHYLLUS PERFECTUS.

M.A. Sharp & E Wilson, del.

10 TILARGUS TETRASPILOTUS.
11 " COMPLICATUS.
12,12a CATOPIUS IRREGULARIS.
13,13a,b GENATTUS ÆQUALIS.
14 TROGODERMA CELATUM.
15,15a,b EUCNOCERUS DISPAR.
16 CACCOLEPTUS ROTUNDUS.
17,17a HEMIRHOPALUM BUPRESTOIDE.

18 HEMIRHOPALUM HADROTOMOIDE.
19 CRYPTORHOPALUM 7-SIGNATUM.
20a,b " GERMANUM.
21 " SUBFASCIATUM.
22 " APPENDICULATUM.
23,23a " EQUISOLEÆ.
24 " DISCEDENS.
25♀,25a♂ " PEDESTRE.
26,26a NOSODENDRON CHAMPIONI.

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